TEXTILE TECHNOLOGY DIGEST

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ABSTRACTS

FIBERS A

Natural fibers A1

MODE OF ACTION OF HAIR-LOOSENING ORGANISMS. K. J. Whiteley (Univ. of New South Wales). (Letter to the editor). Nature 185: 781 (Mar. 12, 1960). (1796)

The bacteria penetrate from the flesh side of the skin to proliferate around the follicles, and the most significant feature of fiber loosening is the digestion of material in these regions. Whereas efforts have, in the past, been concentrated on the degradation of the soft keratin, the production of an enzyme designed to digest the dermal material immediately adjacent to the follicle would seem likely to result in a greater yield of undamaged fiber.

AFGHAN WOOLS: WOOL PRODUCTION INDUSTRY OF AFGHANISTAN AND THE TYPES AND QUALITIES OF AFGHAN WOOLS. A. S. Demirüren. J. Textile Inst. 51: P78-P86 (Feb. 1960). (1797)

Results of fiber type and quality tests of the representative fleece samples indicate that most of the Afghan wools are within the required qualities of good carpet wools. The qualities, staple lengths, yields, and colors of the internal commercial wool types and grades are determined. Quality tests of the Afghan cashmere fiber show that it has fairly good commercial properties and compares favorably with cashmere fibers produced in other countries. Tables, 8 refs.

REPORT OF THE DIRECTOR OF RESEARCH FOR 1959. Wool Inds. Research Assoc. Leeds, England. Feb. 1960. 39 p. WIRA pub. no. 214. (1798)

Research for 1959 at the Wool Industries Research Assoc. is reviewed under the headings: scouring and combing, woolen carding and spinning, worsted drawing and spinning, weaving, cloth consulting, technical chemistry, technical survey, Scottish Branch Laboratory, testing, mathematics and statistics, biology, chemistry, and physics. A bibliography of WIRA publications is presented.

ANOMALIES IN THE MICROSCOPIC STRUCTURE OF SOME WOOLS. T. D. Brown and W. J. Onions. (Letter to the editor). Nature 186: 93-94 (Apr. 2, 1960). (1799)

In some types of wool a core more basophilic than the ortho-cortex exists, usually at the junction between the ortho and the para portions, and sometimes completely in the para-cortex. It is proposed to call this core the meta-cortex. Observations indicate that the medulla and the meta-cortex may be similarly derived within the fiber follicle. Photomicrographs, 4 refs.

ELONGATION DIAGRAMS OF WOOL FIBERS AND THEIR MECHANICAL PROPERTIES. E. Szucht. Prace Inst. Wlok. 9, No. 2(31): 39-58 (1959). In Polish. Through BCIRA 40: 1077 (1960). (1800)

Elongation curves obtained for 19 wool types are discussed, and the results of tensile-strength measurements carried out on these fibers are tabulated. The parameters characterizing the elastic properties of wool are determined on the basis of the elongation curves, adopting as criterion the elasticity modulus of the initial elongation or the force required for stretching the fibers until they reach the flow point (based on their unit weight). The values determined are used as a basis for the classification of various wools. Dead fibers were found to have a high tendency to deformation caused by tensile stresses.

SOME HISTOCHEMICAL OBSERVATIONS ON AMINO-ACIDS AND NUCLEIC ACIDS IN THE WOOL FOLLICLE. M. L. Ryder (Wool Inds. Research Assoc.). Quarterly J. Microscopical Science 100: 1-11 (Mar. 1959). (1801)

NEWEST WAY TO LIGHT COTTON-CLASSING ROOMS. Textile World 110: 105 (Apr. 1960). (1802)

The newest lighting practices in cotton-classing rooms for color grading cover the scope, quality, quantity, type, and geometry of illumination.

HEMICELLULOSES OF ROSELLE FIBER (HIBISCUS SABDARIFFA). P. C. Das Gupta (Indian Central Jute Comm.). (Letter to the editor). Textile Research J. 30: 237 (Mar. 1960). (1803)

HUMIDITY-TWIST RELATIONSHIPS IN JUTE FILAMENTS. A. C. Chakravarty (Indian Central Jute Comm.). J. Textile Inst. 51: T59-T65 (Feb. 1960). (1804)

The twist developed in jute filaments as the relative humidity of the surrounding air changes has been studied. A measure of the torque resulting from the twist was obtained. A few samples of other allied fibers were also tested. Diagr, graphs, tables, 7 refs.

Manmade fibers A2

FIGHTING METAL CORROSION IN VISCOSE RAYON PRODUCTION. G. FitzGerald-Lee. Skinner's Silk & Rayon Record 34: 348 (Apr. 1960). (1805)

The advantages of using nickel and nickel alloys to avoid contaminating viscose rayon with copper and iron are discussed. Comparative resistances of nickel and nickel alloys and other non-ferrous alloys to dilute caustic under various conditions are tabulated.

SPINNING OF RAYON AS RELATED TO ITS STRUCTURE AND PROPERTIES. W. A. Sisson (Am. Viscose Corp.). Textile Research J. 30: 153-170 (Mar. 1960). (1806)

Methods of varying the structure and degrees of orientation of viscose rayon and the correlation of these variations with the properties of the resultant product are reviewed. Photomicrographs, diagrs, graphs, tables.

STRUCTURE OF HIGH TENACITY VISCOSE FIBERS. R. J. E. Cumberbirch and J. E. Ford (Shirley Inst.). (Letter to the editor). J. Textile Inst. 51: T132-T135 (Mar. 1960). (1807)

High tenacity viscose fibers are shown to possess a homogeneous surface layer (or cuticle), and a dye-retentive (or skin-like) region which forms the central part of the fibers; this region contains innumerable cavities. The evidence is in agreement with a mechanism of fiber formation previously published. Photomicrographs, 8 refs.

TEMPERATURE DEPENDENCE OF BIREFRINGENCE OF FIBERS. PART 2. TEMPERATURE DEPENDENCE OF BIREFRINGENCE OF ACRYLIC FIBERS. S. Okuaki, S. Hasegawa, and R. Onooka. PART 3. COMPARISON OF BIREFRINGENCE-TEMPERATURE CURVES AMONG VARIOUS ACRYLIC FIBERS. S. Okuaki, S. Hasegawa, R. Onooka, and N. Agatsuma. Bull. Textile Research Inst. (Japan) No. 51: 27-35 (1959). In Japanese (English summary). Through BCIRA 40: 1074 (1960). (1808)

The birefringence-temperature relationship was studied and curves for Exran, Zefran, Kashmilon, Vonnel, Orlon, Kanekalon, and Dynel X-54 are compared; they can be used for fiber identification.

ALON: NEW ACETYLATED CELLULOSIC FIBER. T. Takagi and J. B. Goldberg. Modern Textiles Mag. 41: 49-52 (Apr. 1960). (1809)

The development of the fibrous acetylation process and the manufacture, characteristics, processing, and economics of Alon are described. Graph.

THERMAL STABILITY OF NYLON 66. P. Rochas and J.-C. Martin. Bull. Inst. Textile France No. 83: 41-84 (Aug. 1959). In French. Through BCIRA 40: 395 (1960). (1810)

After a brief introduction dealing with studies on the yellowing of polyamides and the relationship between yellowing and polymer degradation, the authors review the yellowing of nylon by the action of heat, the physical and chemical properties of nylon subjected to heat, the chemical changes increasing or decreasing its tendency to yellowing, and the theories relating to the yellowing mechanism of nylon as a result of heat treatments. Various photometric methods and analytical processes were developed or improved for these investigations. 51 refs.

TRADE NAMES OF POLYAMIDE FIBERS. E. P. Frieser. SVF Fachorgan Textilveredlung 15, No. 1: 4-6 (1960). In German. Through BCIRA 40: 896 (1960). (1811)

An alphabetical list is given of the trade names of polyamide fibers, including also their respective constitution (monomer), and names of the producers.

PRESENT POSITION OF PERLON. G. Früh. Melliand Textilber. 41, No. 2: 200-201 (1960). In German. Through BCIRA 40: 898 (1960). (1812)

A survey is made of the progress in the production of Perlon, with special reference to the improved light resistance, yellowing prevention by the incorporation of an optical brightener in the fiber substance (pure-white Perlon), hydrophilic finishing with Lurotex A 25, and heat stability improvement of technical fabrics by means of 5% pyrocatechol solutions.

NEW POLYAMIDE FIBERS. E. P. Frieser. SVF Fachorgan Textilveredlung 15, No. 1: 7-12 (1960). In German. Through BCIRA 40: 897 (1960). (1813)

An attempt is made to review the research results in the field of polyamide fiber production, with special reference to nylon 7 (polyamide fiber on oenantholactam basis), nylon 226 (obtained by polycondensation of phellonic acid and hexamethylene diamine), nylon 69 (based on oleic acid), nylon 76 (obtained by condensation of isocinchomeric acid with hexamethylenediamine), polyamide fibers with pyridine rings in the main chains, Urylon (produced by polycondensation of nonamethylenediamine and urea), and polyamide fibers based, respectively, on polyaminotriazole, m-xylenediamine, and ethyleneamino acids.

SEARCH FOR NEW POLYESTERS. Man-Made Textiles 37: 56, 58 (Mar. 1960). (1814)

Various efforts to produce polyester fibers with modified characteristics are reviewed, and the preparation and fiber and yarn properties of copolymers of 3-methoxy-4 (β hydroxy-ethoxy) benzoic acid or its methyl or ethyl ester, with 4-(β hydroxy-ethoxy) benzoic acid or the methyl or ethyl ester (BP 813 239 issued to Kokoku Rayon & Pulp Co. Ltd) are described in detail.

FIBER DATA SHEETS: COPOLYMER FIBERS. P.-A. Koch. Z. ges. Textil-Ind. 62, No. 1: 3-7 (1960). In German. Through BCIRA 40: 709 (1960). (1815)

This is the extended second edition of the previously published tables. It refers to the fibers Darvan, Dynel, and Verel (inventors and development, raw materials, production methods, chemical constitution, properties, products, processing properties, and applicability). Master patents are listed. 57 refs.

POLYOLEFINS: WORLD INTEREST GROWS. A. G. Beaumont. Skinner's Silk & Rayon Record 34: 334-339 (Apr. 1960). (1816)

The chemistry and properties of the polyolefins are discussed, with emphasis on the fiber forming polyethylene and polypropylene. The conversion of polypropylene into monofilament and multifilament yarns is described, and the properties of olefin fibers are discussed. Photos, graphs, table.

SOME LOAD-EXTENSION PROPERTIES OF CRIMPED FIBERS. F. Frank (Leeds Univ.). J. Textile Inst. 51: T83-T90 (Mar. 1960). (1817)

A theory to describe the relation of crimp parameters to the initial portion of the stress-strain curve is developed. In the order of decreasing importance, the parameters affecting the initial portion of the stress-strain curve are: (1) fiber diameter, (2) crimp amplitude, (3) crimp wavelength. Diagrs, graphs, 8 refs.

LIGHT PROTECTED NYLON. W. G. Settele. SVF Fachorgan Textilveredlung 15, No. 1: 22-25 (1960). In German. Through BCIRA 40: 899 (1960). (1818)

It was found that the tendering effect of titanium dioxide (increasing with increasing fineness of the pigment and its increased content in the fiber) reaches a maximum and, after passing through a critical concentration, its catalytic effect on the photodegradation of nylon decreases. This is attributed to the fact that the accumulation of pigment in the fiber becomes so high that the titanium dioxide particles in the fiber nucleus, removed from the light, are no longer able to exert a photocatalytic action on the fiber. Experiments on protected and unprotected nylon are reported and the results tabulated.

FIBERS WITH A PURPOSE. J. W. S. Hearle. Skinner's Silk & Rayon Record 34: 350-352 (Apr. 1960). (1819)

The properties of Teflon and Fortisan fibers and their specialized uses are discussed. Photos, graph, tables.

YARN PRODUCTION B

QUALITY CONTROL IN PREPARATION AND SPINNING OF MANMADE FIBERS ON THE WORSTED SYSTEM. E. Kirk (Ormerod Bros. Ltd). Textile Merc. 142: 449-450, 452-453 (Apr. 1, 1960). (1820)

The complications in quality control resulting from the many tow to yarn conversion, drawing, and spinning systems are pointed out, and the basic techniques and requirements of a quality control system are discussed.

HOW TO EVALUATE SCRATCH COMBING. Textile Bull. 86: 50, 52 (Apr. 1960). (1821)

The advantages and disadvantages of preblending and scratch combing for upgrading cotton are discussed, and a method for calculating the economic value of the latter is illustrated.

TEXTILE OILS AND OILING: LUBRICANTS ON THE WOOLEN SYSTEM. H. V. Terry. Textile Merc. 142: 77-78, 80 (Jan. 15, 1960); 118-120 (Jan. 22, 1960). (1822)

Various aspects of the development and use of wool lubricants are discussed. Their requirements, as well as the properties of the main types used commercially, are described.

SLIVER TO YARN SPINNING OF COTTON. Can. Textile J. 77: 51-52 (Apr. 1, 1960). (1823)

The features and advantages of the Tweedales & Smalley sliver to yarn spinning system are described. The system is based on the use of a special type of drawframe (AKP 12 packaging drawframe) for preparing the slivers for the special type of creel on the spinning frame.

FIBER BLENDING ON THE COTTON SYSTEM. W. Nutter (T. M. M. (Research) Ltd). Fibres and Plastics 21: 115-118 (Apr. 1960). (1824)

The relative efficiency and economy of a number of different methods of blending, for both natural and synthetic fibers (e.g. preblending and blowroom, card, drawframe, and ribbon lap blending) are discussed.

REPORT OF DISCUSSIONS OF QUESTIONS ON OPENING, PICKING, CARDING, AND SPINNING. Textile Operating Executives of Georgia. Atlanta, Ga. 1960. 14 p. (1825)

Pre-blending cotton, crop comparison, blending irrigated cottons, print-weight picker lap scales, high compression units, metallic card clothing, split top flats, large card and drawing coilers, running synthetics on drawing, new continuous carder, creeling large package roving, spobbin, variable pitch builder screw, fly frame roll clearers, vacuum cleaners, synthetic clearer covering, antifriction top rolls, relative humidity, large package roving, filling spinning, paper tubes sticking on spindles, soft cots, new drafting systems, Piedmont spinning frames, special finished travelers, high speed rings, spinning bobbin builds, relative humidity and temperature, and gear tester.

MIXING OF FIBERS IN WORSTED YARNS. PART 2. FIBER MIGRATION. W. J. Onions, R. L. Toshniwal, and P. P. Townend (Leeds Univ.). J. Textile Inst. 51: T73-T79 (Feb. 1960). (1826)

The disposition of wool and nylon fibers within worsted yarns, according to fiber fineness and length, has been studied. Differences in mean fineness between components are associated with a marked predominance of the coarser component in the periphery. This is striking when the two components are separately very uniform, but also occurs in mixtures of wools of markedly different qualities. This phenomenon occurs almost entirely in spinning. Differences of mean fiber length result in the longer fibers being drawn to the center, especially with very uniform components. This occurs in the later stages of drawing as well as in spinning. Graphs, tables, 9 refs.

Opening, picking, fiber preparation B1

MECHANIZATION OF BLENDING IN CARDED YARN SPINNING MILLS. E. Boroczy. Magyar Textiltech. 11, No. 3: 95-98 (1959). In Hungarian. Through BCIRA 40: 725 (1960). (1827)

Equipment was designed, simulating hand-stacking, for mixing batches of 2,000 kg. It consists of two or three stacking chambers adjoining one another, a stacking chain of rolls building up the stacks in the chambers from the components willowed consecutively, a milling apparatus raking down the stacks vertically, a belt conveyor, and a fan conveying the raked-down blend to the hopper feeding the willows. In the second chamber the rewillowed mixture is built up into a new stack which in turn is raked down and stacked in another empty chamber. The process is repeated as many times as is necessary. The blend is finally conveyed by the fan to the storage room.

DO YOUR CLEANING AT THE PICKER. G. J. Kyame and W. A. Latour (So. Reg. Research Lab.). Textile Inds. 124: 127-131 (Apr. 1960). (1828)

Evaluation of the SRRL carding cleaner under laboratory conditions indicates that this modification of the finisher section of a one-process picker enables the picker line to remove 50% of the trash in cotton, with a negligible loss of lint. There is no evidence of fiber damage, no increase in neps, and no impairment of yarn properties. The laps produced are well-felted, satisfactorily uniform, and card with about 5% less strips than do conventional laps. Photo, diagrs, tables, 6 refs.

EXPERIMENTAL STUDY OF THE EFFECT OF WINDING ON PICKER LAP REGULARITY. A. Barella and L. Viertel. Investigacion e Informacion Textil 2, No. 3: 169-187 (1959). In Spanish. Through BCIRA 40: 923 (1960). (1829)

On the basis of certain tendencies observed in the diagrams reproducing the internal irregularity of picker laps in cotton and viscose rayon spinning, it was assumed that, in addition to other factors (feeding, etc.), winding of the lap affects its regularity. Experiments show that winding under insufficient pressure causes stretching of the lap and that, by increasing the pressure exerted on the calender roller, on the one hand, and on the rack acting on the lap, on the other, the lap irregularity can be improved by reducing considerably the variability in weight per length unit (abstr. 3675/59).

Carding and combing B2

NEW DEVELOPMENTS IN CARDING DACRON POLYESTER STAPLE. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Feb. 1960. 4 p. Bull. D-116. Free. (1830)

Results of a limited carding study of 1.5 denier Dacron staple on flat top and granular cards clothed with metallic wire are discussed.

CARDING MACHINE WITH ONE WORKING ROLLER FOR PROCESSING VISCOSE STAPLE FIBER. K. Tsi-mo. Tekhnol. Tekstil. Prom. No. 4(11): 71-74 (1959). In Russian. Through BCIRA 40: 286 (1960). (1831)

The carding machine described, in which the flats are replaced by one working roller, makes it possible to reduce the diameter of the main cylinder and to increase the width of the working surface of the machine. The productivity of the machine is improved, the carding waste reduced from 3-4% to 0.5-1%, and 2.5-3% of the staple fiber saved.

NEEDLING OF COTTON COMBING MACHINES. F. Walz. Textil-Praxis 14, No. 12: 1203-1207 (1959). In German. Through BCIRA 40: 928 (1960). (1832)

Needling systems for the comb segment and top comb are discussed, with special reference to those used in the combing machines of Platt (Hartford model), Saco-Lowell (model 56), and Rieter (model E7).

Drawing and roving B3

MODERN DRAFTING TECHNIQUE. PART 1. A. A. Hayes (Casablancas High Draft Co. Ltd). Textile Weekly 60(1): 884-888 (Apr. 8, 1960). (1833)

The latest arrangement in the Casablancas system for bringing the bands nearer to the nip of the front rollers is described. Photo, diagr.

SHORTENED CONTINENTAL WORSTED DRAWING SYSTEM. La Duranitre SA. Textile Recorder 77: 93, 95 (Mar. 1960). (1834)

Incorporating an autoleveling operation, the shortened drawing system described produces rovings in four operations. It comprises three gilling operations followed by a high draft finisher, and incorporates the autoleveling operation on the second gill. Photos.

CONTROL OF SLIVER THICKNESS. PART 5. FREQUENCY RESPONSE, STABILITY, AND EFFECT OF A NON-LINEAR DRAFT CONTROL SYSTEM. A. Aoki. J. Soc. Textile Cellulose Inds. Japan 15, No. 12: 980-984 (1959). In Japanese (English summary). Through BCIRA 40: 932 (1960). (1835)

The mechanism of an automatic level-control system is described; the variation of sliver thickness is measured by air-micrometer. The air-micro-nozzle (cf. the conventional trumpet) is set at the front of the delivery rollers and the transmitting loop of signals is: nozzle → bellows → record pen → electric switch → relay → pilot motor → speed regulator → draft change gear train → feed roller (or delivery roller). The system is analyzed theoretically; good control of long-term variation is to be expected.

REPRESENTATION OF SLIVER IRREGULARITY. W. Wegener and E. G. Hoth. Melliand Textilber. 41, No. 1: 10-15 (1960). In German. Through BCIRA 40: 929 (1960). (1836)

The mass variations in a sliver are due (1) to defects (neps, knots, etc., occurring sporadically) and (2) to irregularity (continuous cross-section variation). The latter is discussed, with reference to the means for the characterization of sliver irregularities: the length-variation function, the autocorrelation function, and the spectrum function. Definitions of these functions are given, their interrelationship is discussed, and they are applied to an ideal sliver. The effect of certain irregularity factors in actual slivers (cohesion of the fibers, drafting waves, periodical disturbances, count variations, and cross-section variations) on the three functions is examined; the length-variation function is found to express all irregularity factors and, therefore, is regarded as the most important, but the spectrum function is preferable for the analysis of certain irregularity characteristics. 25 refs.

REGULATING SYSTEMS FOR THE EQUALIZATION OF SLIVERS. PART 12. EVALUATION OF THE SLIVER EQUALIZATION FROM TECHNOLOGICAL VIEWPOINTS. W. Wegener and H. Bechlenberg. Textil-Praxis 14, No. 12: 1212-1218 (1959). In German. Through BCIRA 40: 930 (1960). (1837)

The degree of sliver equalization (controlled and uncontrolled) is discussed and evaluated from the variation curve and variation amplitude in dependence of the fiber mass fed to the drawframe and on the basis of the length-variation curve. (For previous articles see abstr. 882/60, 883/60, and 1343/60.)

REGULATING SYSTEMS FOR THE EQUALIZATION OF SLIVERS. PART 13. EXPEDIENT USE OF SLIVER EQUALIZATION DEVICES IN THE SPINNING PLANT. W. Wegener and H. Bechlenberg. Textil-Praxis 15, No. 1: 10-16 (1960). In German. Through BCIRA 40: 931 (1960). (1838)

The use of equalization systems in worsted and cotton spinning (classical and abbreviated) is discussed, examples being given of possible arrangements on drawframes and cards.

PRODUCTION COST AND PACKAGE SIZE ON COTTON SPEED FRAMES. F. Charnley. Textile Recorder 77: 44-45 (Apr. 1960). (1839)

The way in which speed frame package size affects the quantity of material in process and thereby yarn costs is considered. Graph, table.

HIGH SPEED DRAWFRAME FOR COTTON AND MANMADE FIBERS. Soc. Alsacienne de Constructions Mecaniques. Textile Recorder 77: 64-65 (Apr. 1960). (1840)

The S. A. C. M. speed drafter ER is a two delivery unit catering to all fibers up to 3-1/8 in. staple. Its features are described. Photo, diagr.

Spinning, winding, twisting B4

PRINCIPLES OF FRICTION TWISTING. D. F. Arthur and A. F. Weller (Brit. Nylon Spinners Ltd). J. Textile Inst. 51: T66-T72 (Feb. 1960). (1841)

A method of false twisting by frictional contact between yarn and a moving surface is described and the relation between the variables, obtained experimentally, is discussed. It is shown that equivalent twist-head speeds of up to 1,000,000 rpm can be obtained at actual rotational speeds of up to 5,000 rpm only. Diagrs, graphs, table, 4 refs.

FANCY YARNS AND PRINCIPLES OF FANCY TWISTING. PART 3. MEANS AND ARRANGEMENT FOR THE PRODUCTION OF FANCY THREADS. J. Ecker. Textil-Praxis 14, No. 12: 1199-1203 (1959). In German. Through BCIRA 40: 938 (1960). (1842)

Further methods are reviewed, with special reference to new possibilities of fancy thread production by twisting-in continuous threads and thread pieces. (For previous parts see abstr. 897/60 and 1357/60.)

EFFICIENCY IN DOUBLING. T. W. Walker. Textile Weekly 60 (1): 429-433 (Feb. 19, 1960). (1843)

It is shown that, by means of simple wheel-changes, and by careful production planning, it is possible to reduce chances of errors in twist wheel-changes, and to some extent check efficiency losses. Tables, diagr.

DEVELOPMENT IN SPINNING AND DOUBLING SPINDLE DESIGN. SKF Kugellagerfabriken GmbH. Textile Mfr. 86: 109-110 (Mar. 1960). (1844)

Features and advantages of the HF spindle insert are described. Photos.

MAGNETIC TOP ROLLS: MILL REPORT. Textile Inds. 124: 139 (Apr. 1960). (1845)

Results of a 3 month test indicate cleaner and more even yarn is produced, less cleaning is required, and consumption of power is lower.

EFFECT OF PROPERTIES OF SYNTHETIC RUBBER TOP ROLLER COVERINGS ON PERFORMANCE OF COTTON RING SPINNING FRAME DRAFTING SYSTEMS. K. H. Banke. Faserforsch. u. Textiltech. 10, No. 11: 507-514 (1959). In German. Through BCIRA 40: 936 (1960). (1846)

The effects of nipping ability and of the elastic and electrical behavior of rubber-covered top rollers on the quality and quantity of the yarn spun are examined, and their advantages discussed. Top roller coverings with a Shore hardness of 65-75° were found to give optimum results if the electrical resistance of the coverings under the conditions mentioned is $\leq 0.5\text{-}1.0.10^{10}\,\Omega$.

RING TECHNIQUE: SECRET OF PRODUCTION. W. P. Dutemple (Whitinsville Spinning Ring Co.). Can. Textile J. 77: 45-48 (Apr. 1, 1960). (1847)

This paper reviews the development of rings, and discusses their installation, the changing of travelers, and vertical rings.

RINGSPANN TENSION DISC. Skinner's Silk & Rayon Record 34: 346 (Apr. 1960). (1848)

The Ringspann disc is designed to clamp the bobbin on the spindle more firmly, as well as to center it accurately. Detailed diagrams showing the action of a bobbin holder fitted with the discs are given.

Yarns B5

HYSTERESIS AND RELATED ELASTIC PROPERTIES OF TEXTILES. PART 3. SOME MEASUREMENTS ON TIRE CORDS. K. Shirakashi, K. Ishikawa, N. Nakajima, and H. Kusuki. J. Soc. Textile Cellulose Inds. Japan 15, No. 12: 985-991 (1959). In Japanese (English summary). Through BCIRA 40: 1081 (1960). (1849)

By combining an 8-mm movie camera with a counting tube resilience meter, the energy loss per cycle of nylon, Terylene, and rayon yarns and cords was measured (10, 100, 500, and 1,000 cycles; 1 and 3% strains; strain of the constant-rate-of-deformation type; speed 1 cycle per sec). The results are discussed in relation to hysteresis loss, comparison of stabilized and unstabilized nylon, the effect of temperature, and the effect of twist.

SYNTHETIC FIBER ROPE. Columbian Rope Co. Am. Textile Reptr. 74: 13-14, 36 (Mar. 31, 1960). (1850)

The reasons for the growing utilization of such manmade fibers as nylon, Dacron, and polyethylene for special rope applications are pointed out.

ELONGATION AS A FUNCTION OF TWIST OF CONTINUOUS FILAMENT YARNS. A. Barella. Reply: J. W. S. Hearle. (Letters to the editor). J. Textile Inst. 51: T135-T137 (Mar. 1960). (1851)

MODIFIED CONTINUOUS FILAMENT YARNS. K. Tanemura (Toyo Rayon Co.). (Letter to the editor). J. Textile Inst. 51: P167-P168 (Mar. 1960). (1852)

An attempt is made to establish the priority for making the first experimental samples of nylon stretch yarns.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

YARN-TENSION MEASUREMENT: REVIEW OF METHODS USED DURING WINDING AND ALLIED PROCESSES. D. Brunnschweiler and A. C. Parikh (Manchester Coll. Science & Technol.). J. Textile Inst. 51: P63-P73 (Feb. 1960). (1853)

Methods of detecting and indicating the tension of running yarns, applicable in mill and laboratory, are described and compared. The application of yarn-tension meters during winding and warping is reviewed. Diagrs, 60 refs.

DOUBLE-DISC TENSION DEVICES FOR PIRN WINDING. Schweiter Ltd. Textile Weekly 60(1): 891 (Apr. 8, 1960). (1854)

PATENTED FLANGED ROLLER FOR WINDING SYSTEMS. H. Haertl. Melliand Textilber. 41, No. 2: 157-158 (1960). In German. Through BCIRA 40: 961 (1960). (1855)

The arrangement described concerns an after-clearer for yarns that have already passed through the slot clearer. The uniform thread tension in the after-clearer increases the bobbin weight by at least 1.2%.

THREAD TENSIONS TO BE USED DURING PROCESSING OF CHEMICAL FILAMENTS. G. Gründig. Deut. Textiltech. 10, No. 1: 22-25 (1960). In German. Through BCIRA 40: 970 (1960). (1856)

It is shown that the mean thread tensions determined from the stress-elongation curve of a certain material (viscose rayon, cuprammonium rayon, acetate rayon, etc.) can be retained in all processing stages without the risk of overstretching or damaging the material. During wet treatment (sizing), the wet elongation (in the case of subsequent drying in the stretched state) should not exceed 1% if the breaking elongation, and its elastic component are not to be excessively reduced for the subsequent weaving process.

WARP SIZING. A. N. Edmondson (Birtwistle & Leigh Ltd). Textile Weekly 60(1): 892, 895-896 (Apr. 8, 1960). (1857)

The function of starch as a yarn sizing material preparatory to the weaving process, and the growth of new substances for this purpose, brought about by the introduction of different fibers, is examined.

EFFECT OF THE WARPING CYLINDER ON THE THREAD-TENSION DISTRIBUTION IN THE WARP. R. Stöck. Melliand Textilber. 41, No. 2: 165-167 (1960). In German. Through BCIRA 40: 964 (1960). (1858)

It is shown that, by appropriate application of the first warp layer and correct adjustment of the warping cone, any thread-tension differences occurring can be reduced so that, owing to the finer and more accurate adjustability of these machines, better warps can be produced than on those with nonadjustable (fixed) conical warping cylinders.

SLUB CATCHERS PINPOINT DEFECTS. Textile Inds. 124: 145, 148 (Apr. 1960). (1859)

Survey shows how mills are using electronic slub catchers to check on spinning and winding performance. Photos.

LANCE STATIC CONTROL UNIT. Coates Smith Ltd. Hosiery Trade J. 67: 102-103 (Apr. 1960). (1860)

The Lance unit has been specifically designed for the complete elimination of static charges in yarn and fabric, and is based on the principle that it is more effective to remove the static in stages as it builds up rather than to attempt to eliminate it at the latest possible position with one electrode head, as has been the normal practice. Although mainly intended for use in warping, its use can be extended to warp knitting and finishing processes.

HOW EXCESSIVE STRETCH ON SLASHER AFFECTS WEAVING PERFORMANCE. P. K. Chouthoy, C. C. Shah, and P. C. Mehta (Ahmedabad Textile Industry's Research Assoc.). Indian Textile J. 70: 154-158 (Dec. 1959). (1861)

This paper gives some data on the changes in the tensile properties and weavability of warp yarn as the stretch in slashing is increased. A marked deterioration in weavability was observed when the stretch was very high. Tensile strength was not significantly affected but yarn extensibility was progressively reduced as stretch was increased. The yarn also became more nonuniform in respect to both strength and extensibility. With increasing stretch, an increasing proportion becomes nonrecoverable. Graphs, tables.

STUDY OF MODERN FILLING PREPARATION SYSTEMS. H. Deussen, R. A. Moore, and G. I. Kimball (Am. Schlafhorst Co.). Modern Textiles Mag. 41: 25-28 (Apr. 1960). (1862)

This cost study is based on an actual mill installation serving 100 looms equipped with automatic filling magazines and another 100 looms equipped with loom winders. The figures thus obtained and supplemented by figures from other, larger automatic filling magazine and loom winding installations have been projected to illustrate a typical mill operation of 1,200 Draper looms. Graphs.

Weaving C2

WASTE IN SPOOL AXMINSTER CARPET PREPARATION AND WEAVING. P. Ellis. Textile Mfr. 86: 102-104 (Mar. 1960). (1863)

The main causes of waste and methods for their elimination are discussed. Photos, diagrs.

MAS 1 SETTING FRAME FOR AXMINSTER SPOOLS. Platt Bros. & Co. Ltd. Textile Recorder 77: 66-67 (Apr. 1960). (1864)

Advantages claimed for the new setting frame described include an appreciable reduction in spool waste, an increase in the length of carpet woven from each setting, and a reduction in the frequency of carpet faults.

EFFICIENCY IN THE WEAVING SHED. J. C. Ahuja. Textile Recorder 77: 57-58 (Apr. 1960). (1865)

Among the factors discussed are the importance of adequate illumination from both the operating and physiological standpoints, shed humidity, and machine maintenance.

LAPPET AND SWIVEL WEAVING. Z. Grosicki (Royal Coll. Science & Technol.). J. Textile Inst. 51: P140-P150 (Mar. 1960). (1866)

The principles of the mechanisms used in weaving and the constructions of lappet (extra warp figured) and swivel (extra weft figured) fabrics are described. Diagrs.

SCOPE OF JACQUARDS. D. C. Snowden. Wool Rev. 33: 31, 33 (Apr. 1960). (1867)

Introductory lecture in a course on modern jacquard developments.

NEW METHOD FOR DETERMINING THE SHUTTLE RACE CURVE AS MEANS FOR OBJECTIVE PICK ADJUSTMENT. H. Perner and S. Faber. Deut. Textiltech. 10, No. 1: 14-21 (1960). In German. Through BCIRA 40: 976 (1960). (1868)

Present methods (used and not in use) for determining the shuttle race curve and for pick adjustment are reviewed, and the development of a new method and the results obtained are described. In this method, the pirn in the shuttle is replaced by a spraying device whose nozzle emits at high speed a thin jet of liquid marking on the warp threads of the upper shed or on a diagram paper the individual parts of the shuttle path. The method does not require sensitive devices and can be used in practice.

COTTONS AND SYNTHETICS: BROKEN PICKS. Fibre and Fabric 113: 8-9 (Apr. 1960). (1869)

Possible causes of broken picks are analyzed.

FIXING THE STAUBLI DOBBY. G. Williams. Textile Inds. 124: 136-138 (Apr. 1960). (1870)

Photos, diagr.

LOOMFIXER AND HIS JOB. PART 17. W. Westbrook. Textile Bull. 86: 53-54 (Apr. 1960). (1871)

Harness setting and timing are discussed. Diagrs.

CROMPTON & KNOWLES PUSHBUTTON C-7 BOX LOOM. Crompton & Knowles Corp. Textile Bull. 86: 45-47 (Apr. 1960). (1872)

Features of the 4x1 box loom include: an electric protector motion, a shuttle checking device, and an electric brake and clutch arrangement with V-belt drive. Conventional shipper handles have been replaced with pushbutton controls for stopping, starting, and backing up. Photos.

HUNT LETOFF MOTION. Casablancas High Draft Co. Ltd. Textile Merc. 142: 459, 466 (Apr. 1, 1960). Textile Weekly 60(1): 897 (Apr. 8, 1960). (1873)

The Hunt letoff works directly from the warp tension itself, via a lever on the back-rest which responds instantly to the slightest change in the tension. Photo.

LENTZ LOOM HBS III. F. Jansen and R. Maier. Textil-Praxis 15, No. 1: 42-47 (1960). In German. Through BCIRA 40: 972 (1960). (1874)

Constructional details and mechanism of this new type of loom without superstructure (for medium-heavy to very heavy fabrics from wool, spun rayon, etc.) are described. The loom, operating at 142-150 rev/min at a reed width of 215 cm (corresponding to a cloth width of 200 cm), can also be equipped with various additional units, e.g. jacquard machine, optical weft feelers, device permitting the use of two warp beams, etc.

IDEAS UNDERLYING WEAVING MACHINE PATENTS. PART 9. R. Rossmann. Textil-Praxis 14, No. 12: 1236-1240 (1959). In German. Through BCIRA 40: 971 (1960). (1875)

A further nineteen German patents of circular looms are described and the constructions criticized.

WEAVING WITH THE GRIPPER SHUTTLE LOOM. PART 2. M. Steiner. Textile Recorder 77: 46-48 (Apr. 1960). (1876)

The article discusses personnel and yarn preparation requirements, spare part costs, and problems concerned with selvage formation and weft tension. Graphs. See abstr. 950/60 for Part 1.

Knitting C3

HOW TO KNIT AGILON SWEATERS. R. Edge. Textile Inds. 124: 162-165, 192 (Apr. 1960). (1877)

The observations and recommendations for knitting and finishing based on mill experiences. Photos.

NEW TEXTURED YARNS FOR WARP KNITTING. J. Rab. Hosiery Times 33: 44, 46 (Mar. 1960). (1878)

The present and potential use of textured filament yarns for warp knitting is examined from the point of view of the technical difficulties and costs involved.

TEXTILE WEEKLY WARP KNITTING SUPPLEMENT. Textile Weekly 60(1): 675-688 (Mar. 18, 1960). (1879)

Outlook for warp knitting, p. 675-676; Styling and selling trends, by H. N. Aitken, p. 676, 679; Design possibilities in warp knitting fabrics, p. 680, 685; Research and development, p. 685-688; Fabric geometry, p. 688.

KNITTING QUALITY CONTROL: DETAILS OF HATRA POSITIVE FEED SYSTEM. P. Stacey (Hosiery & Allied Trades Research Assoc.). Knitted Outerwear Times 28: 3, 5, 32-34 (Apr. 25, 1960). (1880)

THERMAL TEXTURED FABRICS FOR UNDERWEAR. J. B. Lancashire. Knitter 24: 36-38 (Mar. 1960). (1881)

How thermal textured underwear fabrics are knitted.

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 67: 110-114 (Mar. 1960). (1882)

Among the developments discussed are: Eppinger double-cylinder half hose machine JU-3P; Degageux DCT seamless hosiery machine; loopless toe for full-fashioned hosiery; and yarn levelness tester.

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 67: 125-128 (Apr. 1960). (1883)

Features and operation of the Diamant DUF power flat bar machine are described in detail. Photos, diagrs.

LUIGS LOOP TRANSFERRING V-TYPE KNITTING MACHINE. Hosiery Trade J. 67: 108-110 (Apr. 1960). (1884)

Features of this fully automatic double system machine are described. Photos, diagrs.

VARIATIONS OF STRAIGHT RIB STRUCTURES IN FISHERMAN'S KNIT GARMENTS. PART 1. RACKED EFFECTS. J. B. Lancashire. Hosiery Times 33: 41, 43-44 (Mar. 1960). (1885)

IMPROVED WASHER FOR KOMET VERGE COLLAR. K. O. Metz. Textile Inds. 124: 185 (Apr. 1960). (1886)

CARD CONTROL INCORPORATED ON BENTLEY'S MODEL UO/AE FULL-FASHIONED UNIT. Knitted Outerwear Times 28: 5, 36-38 (Mar. 21, 1960). (1887)

SOME TECHNICAL FEATURES OF STOLL UFD. J. B. Lancashire. Knitted Outerwear Times 28: 3, 5, 27 (Apr. 11, 1960). (1888)

Features of Stoll's fully automatic non-jacquard model equipped with mechanism for transferring needle loops from one bed to the other are described and illustrated.

CIRCULAR LINKS MACHINE CONVERTED FOR 1/2-GAGE KNITTING. Knitted Outerwear Times 28: 7 (Apr. 11, 1960). (1889)

Wildt-Mellor Bromley, of Leicester, England, is offering its double cylinder revolving cambox links machine, model SPJ, with facilities for half-gage knitting on those machines normally cut with either 5 or 6-1/2 tricks per in. Photos.

RACK STITCH KNITTING METHOD. Wildman Jacquard Co. Am. Textile Reptr. 74: 38 (Apr. 14, 1960). (1890)

A method of knitting a variety of rack stitch effects on Wildman Jacquard models TA, TAI, and TJI circular knitting machines without the necessity of using special attachments of any kind is described. Photo.

MANUFACTURE OF WEFT KNITTED INLAY FABRICS. J. B. Lancashire. Hosiery Trade J. 67: 98-101 (Apr. 1960). (1891)

Surface effects based on loop constructions formed by the introduction of backing threads are described. Photos, diagrs.

DYEING AND FINISHING OF KNITWEAR MADE FROM TATTON TEXTURED YARNS. Wm. Tatton & Co. Ltd. Hosiery Times 33: 68-69, 71 (Mar. 1960). (1892)

Recommended dyeing and finishing techniques for fabrics made from these post-relaxed false-twist nylon yarns are given.

PATTERN SCOPE OF WARP KNITTING EQUIPMENT. PART 15. A. Reisfeld. Knitted Outerwear Times 28: 5-9, 30-33 (Apr. 4, 1960). (1893)

In this concluding article, the author considers the role of the following yarn variables in the development of pattern effects: denier, luster, number of filaments, twist, surface characteristics, and shrinkage potential. The contributions of various methods of yarn modification (crimping, bulking, lofting, textralizing, etc.) are also considered.

MODELS OF THE PLAIN-KNITTED LOOP. G. A. V. Leaf (Hosiery & Allied Trades Research Assoc.). J. Textile Inst. 51: T49-T58 (Feb. 1960). (1894)

This paper proposes two mathematical models of the plain-knitted loop, both based on the simple elastica, which can be used to describe the dimensional properties of a plain-knitted fabric. Diagrs, graphs, 9 refs.

FUNDAMENTAL STRUCTURE OF KNITTED FABRICS. PART 2. CAUSES OF QUALITY AND DIMENSIONAL VARIATION. D. L. Munden (Leeds Univ.). Hosiery Times 33: 14-16, 75 (Apr. 1960). (1895)

The effects of yarn tension and friction on knitting quality are examined. Diagr, tables, 1 ref.

CONTROL COTTON YARN PROPERTIES TO REDUCE HOSIERY SECONDS. A. B. Roberts. Textile Inds. 124: 187, 192 (Apr. 1960). (1896)

The effects of yarn elasticity and yarn tension on size and appearance of hosiery are pointed out, and methods of controlling these factors are noted.

COBERT-VOLUMET CONTROL METHOD. J. C. Cobert (Joseph C. Cobert Associates). Hosiery Trade J. 67: 86-89 (Apr. 1960). (1897)

The use of the Volumet testing of gray stockings in conjunction with a detailed knitting construction chart and controlled boarding practices for maintaining uniform sizes and lengths in full-fashioned hosiery is described. Photos, diagrs.

LENGTH CONTROL IN FULL-FASHIONED HOSIERY. J. C. Cobert (Joseph C. Cobert Associates). Textile Inds. 124: 177, 180-185 (Apr. 1960). (1898)

The use of identical constructions in courses, narrowings, and widenings, of maintaining stitch uniformity, and of controlled boarding practices in achieving uniform lengths is discussed.

NON-RUN OR RUN-RESIST HOSE. R. W. Mills. Hosiery Times 33: 51-52, 55 (Mar. 1960). (1899)

The loop structure of the mesh formation used to produce run-resist hose and the method used to produce this construction on a straight bar machine are discussed. Diagrs.

LACE ON MODERN RASCHEL MACHINES. PART 2. B. Wheatley (Nottingham & District Tech. Coll.). Man-Made Textiles 37: 61-63 (Apr. 1960). (1900)

The principles of fabric construction and pattern insertion in warp-knitted lace production are described. Photo, diagrs, graph.

LEAVERS LACE DEVELOPMENTS. Man-Made Textiles 37: 40-41 (Apr. 1960). (1901)

The versatility of the standard Leavers lace machine and its modification with a bottom bar jacquard for increasing the variations of lace structure are briefly discussed. Photos.

PREVENTING DEFECTS IN DYEING ORLON SWEATERS. E. Szlosberg (Color-Knit Dyeing Corp.). Textile Inds. 124: 166-171 (Apr. 1960). (1902)

The commonest defects of dyeing and finishing are discussed, together with their causes and their prevention. Included are uneven dyeing, creased material, poor hand or texture, improper dimensions, difficult separation of bodies, spots and stains, and yellowing. Photos, table.

Fabrics C4

CHEMISTRY AND APPLICATION OF RUG-BACKING COMPOUNDS. PART 2. G. Brawner. Textile World 110: 103, 106-107 (Mar. 1960). (1903)

The requirements of backing compounds, formulation, principal methods of application, and physical factors affecting hand are discussed.

CHEMISTRY AND APPLICATION OF RUG-BACKING COMPOUNDS. PART 3. G. Brawner. Textile World 110: 69-71 (Apr. 1960). (1904)

Typical formulas for precoatings, aftercoatings, automotive carpet backings, and wax-resistant nitrile backings are given.

TUFTED CARPET PATTERNING BY SHEAR TUFTING. Cobble Bros. Ltd. Skinner's Silk & Rayon Record 34: 288, 291 (Mar. 1960). (1905)

Cut pile patterned effects in tufted carpets can be achieved by the use of the Cobble universal patterning attachment with a high and low loop pile machine. The modification consists of fitting a system of stripper fingers which enables selected hooks on the hook-bar to throw off the loop of yarn before the loops on the remaining hooks are sheared. By feeding ends of different color to alternate needles of the needle bar, and by varying the rate of yarn feed to the needles by means of the Cobble universal pattern attachment, it is possible to produce a tufted carpet in which the different colors of high cut pile form a design. This high pile also serves to hide the low loop pile, and so gives to the carpet the appearance of a patterned cut pile carpet.

WOVEN CARPET. PART 10. CHENILLE AXMINSTER CARPET. H. Osswald. Melliand Textilber. 41, No. 1: 38-41 (1960). In German. Through BCIRA 40: 979 (1960). (1906)

WIDE-WIDTH TUFTING: PRINCESS MACHINE MILL TRIALS. Man-Made Textiles 37: 49-50 (Apr. 1960). (1907)

PRINTING VERSUS MACHINE PATTERNING OF TUFTED CARPETS. Man-Made Textiles 37: 50, 55 (Mar. 1960). (1908)

The merits of the Cobble system of patterning by random dyeing and the Brit. Tufting Machinery broadloom printing process are assessed. Photos.

CARPET TUFTING: TECHNOLOGY AND PRINCIPLES OF MANUFACTURE. R. A. Roux. Can. Textile J. 77: 53-56 (Mar. 4, 1960). (1909)

The principles of carpet tufting, the principal mechanisms of tufting machines, patterning devices, and finishing procedures are discussed. Diagrs.

BACKINGS FOR TUFTED CARPET. E. J. Shepherd and D. Weight (Monsanto Chem. Ltd). Fibres and Plastics 21: 99-101 (Apr. 1960). (1910)

Vulcanizing and nonvulcanizing polymers suitable for the backing of tufted carpets, their application, and the advantages and disadvantages of a representative member of each type are described. Photo, diagr, tables.

RUGS AND CARPETS. Consumer Bull. 43: 6-10 (Apr. 1960). (1911)

A consumer guide to the selection of woven and tufted carpets. Information on cost, construction, fibers, wear, quality-control programs, and cleaning is included. Photos.

BACKGROUND TO TUFTING. PART 1. H. Sneyd (Courtaulds Ltd). Skinner's Silk & Rayon Record 34: 387-393 (Apr. 1960). (1912)

In this first part of a three part review of the fundamentals of tufted carpet production, the types of fibers used and the essential parts of the tufting machine and their actions are described. Diagrs.

OPTIMUM CLOTH WIDTH AND MACHINE SIZE IN TEXTILE MANUFACTURE. A. Ormerod. Reply: D. Brunnschweiler. (Letters to the editor). J. Textile Inst. 51: P93-P95 (Feb. 1960). (1913)

TEARING STRENGTH OF FABRICS. PART 1. REVIEW OF THE LITERATURE. P. W. Harrison (Shirley Inst.). J. Textile Inst. 51: T91-T131 (Mar. 1960). (1914)

A comprehensive survey of the literature on the tearing strength of fabrics is presented. The various test methods employed for determining tearing strength, the machines and instruments used in making these tests, and the different expressions for tearing strength are discussed. The effects of the type of fiber, cloth and yarn structure, finish, and weathering treatments are considered, and examples are given of fabrics designed to have a high tearing strength. Diagrs, graphs, tables, 211 refs.

BONDED FABRIC PRODUCTION. A. E. Callaghan & Son Ltd. Textile Weekly 60(1): 694-696 (Mar. 18, 1960). (1915)

Features and operation of the Midhurst opener and fiber amalgamating machines are described. Photos.

MACHINERY FOR NONWOVEN FABRICS. Fibres and Plastics 21: 84 (Mar. 1960). (1916)

Features of the Bondatex machine for the production of random laid webs by the air deposition method are described. Photo.

U. S. MANUFACTURERS OF BONDED AND NONWOVEN FABRICS. Am. Textile Reptr. 74: 23-24 (Mar. 10, 1960). (1917)

Company name, products, and address are given.

NONWOVENS WIDEN STANCE FOR VOLUME. Chem. Eng. 67: 104-108 (Apr. 18, 1960). (1918)

The role of the paper industry in the nonwovens field is discussed.

VENOR TWIN NEEDLE FLORAL TUFTING MACHINE. D. Almond Ltd. Man-Made Textiles 37: 51-52 (Apr. 1960). (1919)

Processing details, design possibilities, and productivity are briefly discussed. Photos.

CORRELATING YARN TEST RESULTS WITH KNIT FABRIC APPEARANCE. G. Guggenheim. Knitter 24: 29-32 (Mar. 1960). (1920)

The Spectrograph is used to correlate yarn defects with fabric appearance. Five yarn spectrograms are matched with photos of fabrics knitted from each yarn. Photos, graphs.

COMPRESSION PACKINGS: DESIGN AND APPLICATION. C. F. Moore. Textile Mfr. 86: 22-23 (Jan. 1960). (1921)

The applicability of flax, cotton, jute, wool, asbestos, and Teflon for compression packings is discussed, with emphasis on factors affecting selection of types and fitting techniques.

WOOL USE IN BASEBALLS. Lannom Mfg. Co. Textile Inds. 124: 132-135 (Apr. 1960). (1922)

1960 ANNUAL REVIEW OF TUFTED TEXTILES. Textile Inds. 124: 87-124 (Apr. 1960). (1923)

Nylon 501 story, p. 88-90, 113; Downhill handling of tufted throw rugs, p. 91-93, 109; Multi-stage curing of latexed carpets, p. 94-94B, 109-111; Curing ranges for latexed carpets, by H. McCall, p. 94C-94D; From law to label, by R. T. Miller, p. 95, 111; Printing: new horizon for tufted carpets, by P. Abbenheim, p. 97-101; Ten-Tex tufting trio, p. 105, 109; We are plagued by underselling, by S. L. Winterer, p. 115-124; Cobble tufting machines halve pattern preparation time, p. 124.

PERFORMANCE AND ACCEPTANCE OF TWELVE SPUN-YARN AND FILAMENT ARNEL BLOUSES. M. E. Gebhardt and E. E. Stout. J. Home Econ. 52: 269-271 (Apr. 1960). (1924)

The purposes of this study were: (1) to compare the performance of a spun-yarn and a filament fabric of 100% Arnel through laboratory testing, wear, and laundering by two methods; (2) to determine the most effective method of caring for the fabrics in relation to laundering, pressing, and stain removal; and (3) to obtain a general wearer reaction to the fabrics from the standpoint of physical characteristics, wear, and care. Table.

COATINGS AND FABRICS FOR DIAPHRAGMS. E. C. Hemes (Reeves Bros. Inc.). Textile Mfr. 86: 105-106 (Mar. 1960). (1925)

The chemical and physical characteristics of coatings and fabrics used in rubber-coated diaphragms are described as guides for use in designing the diaphragms according to their end use. Tables.

PROPERTIES OF INDUSTRIAL FIRE HOSE JACKETED 100% WITH DACRON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Jan. 1960. 11 p. Bull. D-115 (replaces Bull. D-77). Free. (1926)

Data are given on strength, comparative weights, water absorption, abrasion resistance, microorganism and insect resistance, and chemical resistance.

DESIGN AND SCOTTISH WOOLENS. E. Y. Johnston (E. Y. Johnston Ltd). J. Textile Inst. 51: P74-P77 (Feb. 1960). (1927)

USE OF DU PONT FIBERS AS COMPONENTS IN GARMENT FABRICATION. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Feb. 1960. 2 p. Bull. X-117 (replaces Bull. X-63). Free. (1928)

Recommended components for wash and wear garments, such as linings, sewing thread, zippers, hem bindings, etc., are discussed.

DESIGN IN WOVEN STRUCTURE. PART 92. FIGURING WITH EXTRA WARP OR WEFT. D. C. Snowden. Wool Rev. 33: 27 (Mar. 1960). (1929)

PHYSICAL CHARACTERISTICS: THEIR EFFECT ON WASH AND WEAR. W. J. Hamburger (Fabric Research Labs.). Modern Textiles Mag. 41: 51-55 (Mar. 1960). (1930)

The factors affecting wrinkling and surface deformations in wash and wear materials are discussed.

PILLING OF FABRICS AND GARMENTS. A. J. Hall. Wool Rev. 33: 35, 37 (Apr. 1960). (1931)

Discussion of the problem and suggestions for overcoming it.

TECHNIQUE TO PREVENT FABRIC-FRAYING AND SEAM-FAILURE. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Apr. 1960. 3 p. Bull. X-120. Free. (1932)

The technique involves spraying the liquid form of a nylon resin against the cut edges of a pile of fabrics or onto the back of a single layer of upholstery fabric. The resin is then air-dried or mechanically dried by a frame or heat-gun.

EFFECT OF FIBROUS MATERIAL ON THE EFFECTIVE INSULATION VALUE OF CLOTHING. F. W. Behmann, E. Heerd, and H. J. Heinrichs. Melliand Textilber. 41, No. 2: 226-230 (1960). In German. Through BCIRA 40: 1085 (1960). (1933)

In order to elucidate the discrepancy between subjective comfort and measured heat conductivity of clothing, physiological and physical experiments were carried out on technologically comparable tricot fabrics from wool and polyamide fibers. In statistical tests on men, a higher heat emission from the skin was found under normal wear conditions for the polyamide fabric. On the basis of physiological experiments it is assumed that, under hot and dry climatic conditions, the perspiration evaporates mainly on the surface of the clothing in the case of polyamide fabric and on the skin surface in the case of wool. As a result of skin-water evaporation, the biologically effective insulation value is reduced to a greater extent in the polyamide fabric than in wool. These findings are attributed directly to the effect of the fibrous material on the heat and humidity transfer.

REINFORCED PLASTICS: SOME RECENT DEVELOPMENTS. W. Flavell and G. L. Redfearn (Yarsley Research Labs. Ltd). Fibres and Plastics 21: 102-103 (Apr. 1960). (1934)

The use of sisal reinforcement fibers, Terylene overlays, dough molding compounds, glass flake laminates, and an 80/20 liquid copolymer of butadiene and styrene (Esso C-oil resin) is discussed.

DESIGNING OF PILE FABRICS. CHAPTER 5. MOHAIR WEAVE. E. B. Berry. Textile Bull. 86: 61-63 (Apr. 1960). (1935)

Recommendations for weaving, finishing, and dyeing mohair are given. Diagrs.

HOW GOOD IS NYLON FOR INDUSTRIAL BRUSHES? E. E. P. Ruhle (Wilep Brush Co. Ltd). Skinner's Silk & Rayon Record 34: 243 (Mar. 1960). (1936)

Cost and performance characteristics are outlined. Photos.

USE OF REGENERATED POLYAMIDE FIBERS IN THE PRODUCTION OF DUST FILTERING FABRICS. T. Janusz. Prace Inst. Wlok. 9, No. 2(31): 1-15 (1959). In Polish. Through BCIRA 40: 1094 (1960). (1937)

Dust-filtering devices are reviewed, the filtration process and preparation of filtration bags are described, and factors causing rapid deterioration of filter cloths (temperature, effect of the air current, and mechanical vibrations) are discussed. Special reference is made to the production of yarn and fabric from polyamide waste (stockings), tests carried out with these fabrics, and the economic advantages resulting from their industrial use in place of wool cloth.

PRODUCTION OF SURGICAL COTTON WOOL. PART 1. W. Rupert. Textil-Praxis 15, No. 1: 1-7 (1960). In German. Through BCIRA 40: 924 (1960). (1938)

A survey is made of developments in the surgical cotton industry, taking into account the possibility of automation and elimination of contamination with microorganisms. Special reference is made to the machinery concerned with the opening and cleaning process, bleaching and drying, mixing and preopening, carding and packing, and sterilization.

PRODUCTION OF FABRICS FROM KAPRON FIBER/COTTON BLENDS. V. A. Naumov and M. D. Menshikova. Tekstil. Prom. 19, No. 9: 35-38 (1959). In Russian. Through BCIRA 40: 327 (1960). (1939)

The wearability of fabrics produced from mixtures of Kapron and cotton depends not only on the quantity of Kapron introduced but to a great extent on the cover factor of the fabric. Special attention is paid to the diameter of the blended yarn. In order to prevent the decrease of the diameter, crimped Kapron fiber of higher denier must be used. Fabrics obtained from blends of cotton and this Kapron fiber possess increased wearability and lightness and require a smaller quantity of Kapron fiber.

FIBROUS SILICONE RUBBER. R. A. Russell (Conn. Hard Rubber Co.). Ind. Eng. Chem. 52: 405-408 (May 1960). (1940)

A spray process for the production of fibrous matting which consists of the random, web-like arrangement of hollow filaments of silicone rubber has been developed. The fibrous structure of the new material results in improved compression-set resistance and greater porosity than cellular elastomers. The characteristics of the fibrous structure coupled with the environmental resistance of silicone rubber suggest such applications as laundry and drycleaning press padding, vibration absorption, thermal insulation, sterilizable cushioning, and high or low temperature sealing. Photos, diagrs, tables, 6 refs.

SIGNIFICANCE OF CONSUMERS' TEXTILE COMPLAINTS. F. R. Quinn. J. Home Econ. 52: 253-255 (Apr. 1960). (1941)

The role of the consumer in developing standards for textiles.

CONTOURING POLYURETHANE FOAMS. G. C. Toone (Nat. Aniline Div.). Dyestuffs 43: 113-120 (Mar. 1960). (1942)

This article describes the contouring process and shows its effect on foam properties and costs. Bed pillow applications for contoured polyurethane foam are discussed. Diagrs, graphs, tables.

FINISHING D

FINISHING OF POLYESTER FIBERS. E. Bobek. Textil-Praxis 14, No. 12: 1262-1267 (1959). In German. Through BCIRA 40: 1021 (1960). (1943)

A general survey of polyester fiber properties is given, with special reference to the different behavior of the newly developed type 64 by du Pont. The bleaching, dyeing, and finishing of polyester fiber products are described.

DYEING AND FINISHING OF TEXTILES: REVIEW OF RECENT DEVELOPMENTS. A. J. Hall. Textile Merc. (Annual Trade Review Suppl.): 53-55, 70 (Mar. 1960). (1944)

Chemical processes D1

AUTOMATION IN HOSIERY FINISHING. C. Heinrich. SVF Fachorgan Textilveredlung 15, No. 1: 54-62 (1960). In German. Through BCIRA 40: 1041 (1960). (1945)

The German Colorplast machine, described and illustrated, was developed with a view to reducing the great number of operations involved in the preboarding (16) and postboarding (12) processes. All finishing processes are in this machine combined into an almost continuous operation so that there are only five manipulations necessary. The advantages (economical and technological) are discussed.

RECENT DEVELOPMENTS IN MOTHPROOFING. R. W. Moncrieff. Fibres and Plastics 21: 109-114 (Apr. 1960). (1946)

The life history of the common clothes moth, some of the more recent developments designed to give protection against this pest, and mothproof testing methods are described. Photos, photomicrographs, 31 refs.

CAUSE OF FAULTS, STAINS, AND DEFECTS FOUND IN DYEING, PRINTING, AND FINISHING. THEIR DETECTION: PRACTICAL MEANS OF AVOIDING AND CORRECTING THEM. P. Colomb. Teintex 25, No. 1: 26-35 (1960). In French. Through BCIRA 40: 1045 (1960). (1947)

Faults encountered during waterproofing of fabrics, control means, water repellent agents used, and effects of the resins used as filling agents on water repellency and of the degree of squeezing are discussed. For previous part see abstr. 205/60.

SYNTHETIC RESIN SIZES FOR ACETATE FIBERS. Monsanto Chem. Co. Textile World 110: 104 (Apr. 1960). (1948)

The most common methods of preparing a typical acetate filament size are described, and a table to be used as a guide in preparing formulations of size solutions made with synthetic resins is included.

DECORATIVE EFFECTS ON FABRICS. Flexible Prods. Co. Textile Inds. 124: 131 (Apr. 1960). (1949)

Unusual decorative effects may be obtained on woven, nonwoven, or knitted fabrics by spraying them with vinyl plastic in the form of a liquid dispersion. The technique, known as veil-spraying, results in a random line or a spatter pattern, depending on the sprayhead used. Photos.

MELT-ROLLER COATING OF FIBRES. P. Rice (John Kimbell & Co. Ltd). Fibres and Plastics 21: 107-108 (Apr. 1960). (1950)

The Zimmer process for applying thermoplastic substances to fabrics is described, and its advantages are cited. Photo.

PERMANENT CREASING OF ALL-WOOL FABRICS. M. A. Wolfram and J. B. Speakman (Leeds Univ.). J. Soc. Dyers Colourists 76: 169-173 (Mar. 1960). (1951)

The optimum conditions for obtaining permanent creases in all-wool fabrics by the method which involves pretreatment with a solution of sodium bisulfite, followed by rinsing, drying at a low temperature, and pressing, are defined. Using a wide range of fabrics, the effects of the process are compared with those of other methods of achieving the same end. Tables, 6 refs.

CATALYSTS FOR CREASE RESISTANCE. J. T. Marsh. Textile Mfr. 86: 113-115 (Mar. 1960). (1952)

The use of metallic salts as catalysts is discussed, and the factors to be considered in the selection of a catalyst are reviewed.

MECHANISM OF RESIN DEPOSITION IN COTTON. H. Rath, E. Herbolsheimer, and S. Stapf (German Textile Research Inst.). Textile Research J. 30: 201-207 (Mar. 1960). (1953)

It is shown that deposition of synthetic resin in the interior of the fiber is independent of the method of application employed. Accordingly, deposition of the resin, and consequently crease resistance and reduced swelling, can be achieved by immersion as well as by spraying of the precondensate solution on fabrics, provided suitable equipment is available. Diagrs, graphs, tables.

CROSS-LINKING OF COTTON CELLULOSE WITH QUATERNARY AMMONIUM DERIVATIVES OF BIS CHLOROMETHYL ETHERS. G. C. Tesoro (J. P. Stevens & Co.). Textile Research J. 30: 192-201 (Mar. 1960). (1954)

This paper reports some progress in developing a quantitative correlation between the number of cross links introduced into a cellulosic fabric and the resulting changes in fabric properties, e.g. crease recovery, tensile strength, and tear strength. Graphs, tables, 20 refs.

OPTICAL BLEACHES ON WASH-AND-WEAR COTTON. F. G. Villaume (Am. Cyanamid Co.). J. Am. Oil Chemists Soc. 37: 188-192 (Apr. 1960). (1955)

The reaction products used in preparing wash-and-wear cotton and the proposed mechanism whereby these products modify cotton are described. Data are presented to show the reduced whitening effect and fastness properties obtained with the current optical bleaches on wash-and-wear cotton as compared with untreated cotton. Graphs, tables, 6 refs.

OXONE: NEW BLEACHING AGENT FOR NYLON. E. Koller. SVF Fachorgan Textilveredlung 15, No. 1: 53-54 (1960). In German. Through BCIRA 40: 1009 (1960). (1956)

Directions are given for the use of Oxone monopersulfate as bleaching agent for nylon. The product (E. I. du Pont de Nemours & Co.) contains as active component potassium persulfate with at least 4.5% active oxygen. The white granules are odorless and a 1% aqueous solution has a pH-value of 2-3. The disinfecting action of Oxone monopersulfate at 60° C is considerably higher than that of sodium perborate but lower than that of bleaching liquors containing an equivalent amount of free chlorine.

ORIGINS OF CHLORINE BLEACHING IN AMERICA. S. M. Edelstein (Dexter Chem. Corp.). Am. Dyestuff Reptr. 49: 254-263 (Apr. 18, 1960). (1957)

Photos, diagrs, 11 refs.

APPLICATION OF OPTICAL BRIGHTENERS TO SYNTHETIC FIBERS. G. Rösch. Deut. Textiltech. 10, No. 1: 37-39 (1960). In German. Through BCIRA 40: 1010 (1960). (1958)

The suitability of commercially available optical bleaching agents for polyamide, polyester, polyacrylonitrile, and polyvinylchloride fibers (and their blends with viscose rayon and wool) is examined, and the products are compared as regards their brilliancy and light-, wash-, and fixing fastnesses.

BLEACHING POLYAMIDE FIBERS WITH SODIUM CHLORITE. PART 1. M. Bryner. PART 2. K. H. Lebkücher. SVF Fachorgan Textilveredlung 15, No. 1: 48-52 (1960). In German. Through BCIRA 40: 1008 (1960). (1959)

Part 1. A brief survey is made of recent studies concerned with precleaning, chlorite bleaching, and aftertreatment of polyamide fibers. 25 refs. Part 2. Directions are given for the pretreatment, bleaching of woven and knitted fabrics and yarns, chemical and optical bleaching in a single-bath, and bleaching of blended yarns containing polyamide fibers.

IMPROVEMENT IN SOIL RESISTANCE OF RESIN FINISHED FABRICS. PART 2. COMBINATION EFFECTS OF HIGH POLYMER ELECTROLYTES WITH DIMETHYLOL ETHYLENE UREA. T. Matsukawa. J. Soc. Textile Cellulose Inds. Japan 15, No. 12: 1001-1006 (1959). In Japanese (English summary). Through BCIRA 40: 1037 (1960). (1960)

The high polymer electrolytes and dimethylol ethylene urea give improved soil resistance, but the fabrics show less crease recovery than those treated with acrylic polymers and dimethylol ethylene urea. (See abstr. 148/60).

VAPOR-PHASE BLEACHING OF FABRICS. Melliand Textilber. 41, No. 1: 59-61 (1960). In German. Through BCIRA 40: 1007 (1960). (1961)

The principles of the semi-continuously operating machine (Matériel Textile du Rhone; French Pat. 1185987) are described, and the mechanism is illustrated. The machine can be used for desizing, scouring, and bleaching (cotton, linen, regenerated cellulose, and synthetic fiber fabrics). The chlorite bath can be reused and, since it is cold and perfectly stable, there is no risk of chlorine dioxide evolution. Machine components, which are exposed to corrosion, are made exclusively of plastic materials resistant to chemical, mechanical, and thermal factors.

VIEWS ON THE PAPER ENTITLED "OPEN-WIDTH WASHING" BY A. FREYBERG. J. L. Häusermann and E. Hablützel. Melliand Textilber. 41, No. 2: 191-192 (1960). In German. Through BCIRA 40: 1039 (1960). (1962)

Referring to an article by A. Freyberg (abstr. 556/60) in which the action of vibrators is stated not to enhance the removal of chemicals during open-width washing of fabrics, the authors point out that their experiments carried out in a washing section of the Maschinenfabrik Benninger AG with and without the use of turbinators show the effectiveness of the latter in removing sodium hydroxide and sulfuric acid. In a reply (p. 192-194), A. Freyberg, referring to washing experiments on the Intensiva and Cascade washing machines, argues that the experimental conditions of the above-mentioned experiments did not correspond to those in a continuous line, and that it is more economical to replace the old principle of washing in a standing bath (with or without turbinator) by continuously spraying fresh water onto the fabric web and removing immediately the water containing the chemicals. It is suggested that experiments should be carried out under conditions approaching the practical, i.e. with 3 or 4 successive vats at a velocity of 60-100 m/min with and without turbinator, the concentration and respective water consumption being thereby determined at certain intervals.

RETROSPECT AND PROSPECT: PROGRESS AND PROBLEMS IN "WASH-AND-WEAR". PRELIMINARY REPORT. P. B. Mack, M. C. Barra, A. L. Muller, and E. F. Thomas (Texas Woman's Univ.). Am. Dyestuff Reptr. 49: 228-241 (Apr. 4, 1960). (1963)

Forty-two types of garments sold as having wash-and-wear characteristics were used in a study of their laundering behavior. Hand washing, laundering in an automatic home washing machine, and power laundering methods were used. The following types of fabrics were included: cotton, nylon, Dacron, cotton and Cupioni, cotton and nylon, cotton and Dacron, cotton and Arnel, and cotton and Kodel. Photos, graphs, tables, 8 refs.

COTTON CROSS-LINKED AT VARIOUS DEGREES OF FIBER SWELLING. W. A. Reeves, R. M. Perkins, and L. H. Chance (So. Reg. Research Lab.). Textile Research J. 30: 179-192 (Mar. 1960). (1964)

Experimental results obtained by cross-linking cotton cellulose at various degrees of fiber swelling with formaldehyde are reported and some theoretical interpretations of the observed facts to explain wet and dry wrinkle recovery are made. A mechanism is presented diagrammatically to explain wet and dry wrinkle recovery. The mechanism is based upon hydrogen-bond cross links, covalent-bond cross links, and the position of the two types of cross links. Diagrs, graphs, tables, 18 refs.

BLANKET LAUNDERING AND STERILIZATION. REPORT OF A TRIAL AT THE CITY GENERAL HOSPITAL, SHEFFIELD. E. H. Gillespie and W. Robinson. J. Clin. Path. 12: 351-354 (July 1959). Through BCIRA 40: 1095 (1960). (1965)

Four types of blanket were compared: untreated wool, wool treated against shrinkage, loom-state cotton cellular, and terry toweling. The first two were washed in nonionic detergent, followed by a (disinfectant) rinse with a quaternary ammonium compound; the second two, at 160-170° F and 180-200° F, respectively, in an alkaline solution of anionic detergent and soap, followed by a cold (water) rinse. The blankets were washed up to 15 times and compared for general condition, shrinkage, and convenience in use. The bacteriological results were uniformly satisfactory.

POSITION OF COTTON FABRIC FINISHING. H. A. Wannow. Melliand Textilber. 41, No. 1: 75-77 (1960). In German. Through BCIRA 40: 1038 (1960). (1966)

In this review, the author discusses the chemical constitution and properties of nitrogen-containing finishes (reactant type resins, e.g. dimethylol ethylene urea), nitrogen-free products which exhibit no chlorine retention (e.g. epoxide resins), and combinations of both types (acetals of polyalcohols, e.g. the acetal of diethyleneglycol and formaldehyde). Brief reference is also made to oil- and fat-repellent finishes based on perfluorinated higher carboxylic acids (e.g. perfluorocaprylic acid), deodorizing, and bactericidal finishes. 22 refs.

TEXYLON WEAR RESISTANT FINISH. Texylon Ltd. Textile Weekly 60(1): 670-671 (Mar. 18, 1960). (1967)

Texylon, a complex silicone compound in liquid form, is claimed to give improved resistance to wear and prolongation of the serviceability of fabrics. Its application and fabric properties are described. Photos.

FINISHING WITH EPOXY RESINS. K. Lindner. Melliand Textilber. 41, No. 1: 82-85 (1960). In German. Through BCIRA 40: 1032 (1960). (1968)

In this review, the author discusses the course of development leading from epichlorhydrin, by way of precondensates, to epoxy resins and their reaction products with the fiber (cotton, viscose rayon, wool). Reference is also made to the properties, uses, and identification of epoxy resins. 18 refs.

LIGHTFASTNESS PROPERTIES OF OPTICAL BLEACHING AGENTS. H. Fritzsch. Deut. Textiltech. 10, No. 1: 39-41 (1960). In German. Through BCIRA 40: 1011 (1960). (1969)

The investigation was carried out to ascertain the conditions under which optical bleaching agents exhibit maximum lightfastness. The mechanism of fluorescent dyes is discussed and the lightfastness of 28 products are tabulated, suitable for viscose rayon, cotton, and mixed Dederon (polyamide)/cotton fabrics.

SOIL-RETARDANT FINISHING OF TUFTED CARPETS WITH ANTISOILING TC CIBA. Ciba Ltd. Ciba Rev. 12, No. 136: 44-46 (Feb. 1960). (1970)

The principal features of the new soiling agents are noted. Results of soiling tests are given. Photos, graphs.

NEW SILICONE ALLOY FOR DURABLE WATER REPELLENCY ON COTTON. C. J. Conner, W. A. Reeves, and L. H. Chance (So. Reg. Research Lab.). Textile Research J. 30: 171-178 (Mar. 1960). (1971)

The development, and application to cotton, of a new silicone alloy from tetravinyl silane and methyl hydrogen siloxane is described. The alloy may be applied from organic solvents or aqueous emulsions. Greater permanence to laundering was obtained by the solvent method. A satisfactory one-step process was also developed by incorporating zirconyl acetate or zirconium butoxide as catalysts in the treating solution or emulsion. Tables, 10 refs.

NEW DEVELOPMENTS IN EPOXIDE WASH-WEAR FINISHES FOR COTTON. J. Galligan and A. M. Sookne (Harris Research Labs.), J. T. Adams, Jr., H. Guest, and G. H. Lourigan (Union Carbide Chem. Co.). Textile Research J. 30: 208-222 (Mar. 1960). (1972)

A study made of a number of epoxides indicated that the properties imparted to cotton by these products vary greatly with respect to the color of the fabric, the retention of strength for a given level of crease recovery, the rate of hydrolysis of the epoxide in the treating bath, etc. In general, however, they demonstrate resistance to chlorine retention and a high level of durability to all types of laundering, including that used by commercial laundries. One of the most promising epoxides examined was vinylcyclohexene dioxide, which imparted a desirable combination of properties to cotton when used alone or in 2:1 blends with most commercially used nitrogenous resins. Some treatments of cotton were performed with 1,1,3-tris-(2,3-epoxypropoxy)-butane, and the properties of cotton treated with this epoxide provided confirmatory evidence for the important role of cross-linking in improving the properties of cellulose with resin treatments. Graphs, tables, 12 refs.

WATERPROOFING OF TEXTILES WITH STABLE SILICONE EMULSIONS WITHOUT EMULSIFIER AND PROTECTIVE COLLOIDS. H. Machemer and L. Hintz. Melliand Textilber. 41, No. 1: 73-74 (1960). In German. Through BCIRA 40: 1043 (1960). (1973)

Laboratory and practical experiments, carried out by impregnating wool and wool/manmade fiber fabrics with Rotal Si (highly stable silicone emulsion), are described and compared. The results were equally good in long and short liquors.

PROCESSES FOR WATERPROOFING OF TEXTILES. H. Schmink. Deut. Textiltech. 10, No. 1: 42-46 (1960). In German. Through BCIRA 40: 1042 (1960). (1974)

In this review, the author discusses the nature of water repellency, properties of waterproofed fabrics, and the most important waterproofing processes (2-bath impregnation with soap/alumina; impregnation of heavy fabrics, such as awning; single-bath impregnation with paraffin emulsions; use of alkylisocyanates, alkylpyridinium compounds, substituted ethylene ureas, condensation products of aminoplasts and fatty substances, chromium complexes, and silicones).

EFFECT OF FIBER PARAMETERS ON THE WASH-AND-WEAR CHARACTERISTICS OF WOOL FABRICS. J. F. Krasny and H. E. Harris (Harris Research Labs.). (Letter to the editor). Textile Research J. 30: 234-236 (Mar. 1960). (1975)

PERFORMANCE CHARACTERISTICS OF CHEMICALLY STABILIZED COTTON KNIT GOODS. J. B. Irvine (Quaker Chem. Prods. Corp.). Textile Research J. 30: 222-233 (Mar. 1960). (1976)

Chemical stabilizers are shown to impart four advantages to cotton knit fabrics. They reduce the shrinkage by half, make a pronounced improvement in the wash-wear appearance of the fabric, preserve the surface appearance of the knit goods through laundering, and impart crease resistance which helps to maintain a better appearance during wearing. The accompanying losses of bursting strength and abrasion resistance have a minimum effect on the use properties of the fabric because of the flexibility of the knit structure. Photos, photomicrographs, graphs, tables, 2 refs.

Dyeing and printing D2

REACTIVITY: NEW CONCEPT IN CHEMICAL TREATMENT. A. J. Hall. Textile World 110: 75-77 (Apr. 1960). (1977)

The chemistry of the various types of reactive dyes is described, and the extension of the principle of reactivity to finishes is explained.

USE OF IMMEDIAL HYDROSOL DYES IN MACHINE AND PIECE GOOD DYEING. C. Klopfstock and W. Titzka. Melliand Textilber. 41, No. 1: 64-67 (1960). In German. Through BCIRA 40: 1015 (1960). (1978)

Applicability of these dyes (water-soluble sulfur dyes) in machine and piece-good dyeing is discussed, with special reference to the methods which proved satisfactory in practice. Two dyeing methods are particularly mentioned, which were developed for special plant conditions and which might in future find general application.

LEVELING OF VAT DYEINGS. J. M. J. Socas. Investigacion e Informacion Textil 2, No. 3: 201-213 (1959). In Spanish. Through BCIRA 40: 1016 (1960). (1979)

Modifications of the classical method for improving the levelness of vat dyeings are reviewed, with special reference to the methods for retarding the dyeing process, suppressing the initial dye affinity to prevent its adsorption on the fiber in the nonsubstantive form, increasing the migration of leuco compounds, and application of stable leuco esters (Indigosols) with good leveling properties.

MEASURING METHOD FOR IRREVERSIBLE PHENOMENA IN AQUEOUS DYE SOLUTIONS. H. Uedaira. Bull. Textile Research Inst. (Japan) No. 51: 43-45 (1959). In Japanese (English summary). Through BCIRA 40: 1012 (1960). (1980)

The use of an electromagnetic oscillograph, e.g. for measuring the rate of reduction of vat dye, is described.

MODERN DYES. C. Paine (Imp. Chem. Inds. Ltd). Research 13: 122-127 (Apr. 1960). (1981)

The author outlines the development of modern dyeing techniques and describes the different types of dyes in use at present. The article is taken from the Sir William Pope Memorial Lecture given by Mr. Paine at the Royal Society of Arts on February 3rd, 1960. 4 refs.

SIMPLE METHOD FOR DETERMINING DYE PENETRATION IN FABRICS. F. Nestelberger. Textil-Praxis 15, No. 1: 53-55 (1960). In German. Through BCIRA 40: 1013 (1960). (1982)

The method described is a reversal of the abrasion test. Instead of a white sample, a dyed fabric with a medium-grain carborundum paper placed underneath is tested on the abrasion tester. Satisfactory dye penetration in the fabric or yarn appears not lighter but darker than the nonabraded surrounding part. With worsening of the dye penetration, the abraded place becomes increasingly lighter and, by removing the warp and weft threads, it can be easily ascertained whether the impaired dye penetration concerns the fabric or yarn or both. The abrasion results can be expressed in numbers of an empirical scale of five grades.

SOLUBILITIES AND HEATS OF SOLUTION OF DISPERSE DYES IN WATER. D. Patterson and R. P. Sheldon (Leeds Univ. and Bradford Inst. Technol.). J. Soc. Dyers Colourists 76: 178-181 (Mar. 1960). (1983)

The aqueous solubilities of 16 carefully purified disperse dyes have been measured over the temperature range 60-90° C. From these results, the heats of solution in water have been found to lie mainly in the range 10-20 kcal/mole. It is suggested that the higher heats of solution are associated with the presence of hydroxyl groups in the dye molecules, and the possibility of intermolecular hydrogen bonding in the crystalline state. Values for the melting points, wavelengths of maximum absorption, and molar extinction coefficients are also given. Tables, 8 refs.

NEW IDEAS IN THE APPLICATION OF PHTHALOCYANINE DERIVATIVES TO TEXTILES. F. Gund (Farbenfabriken Bayer AG). J. Soc. Dyers Colourists 76: 151-158 (Mar. 1960). (1984)

Practical experience with the monomeric diiminoisoindoline and the metal-polyisoindolines is described, and the differences between Phthalogen dyes of these two types are discussed in connection with their dyeing characteristics and their methods of application. New Phthalogen products based on a monomeric compound of analogous structure to the diiminoisoindoline, but containing an additional heterocyclic ring, are described. An outline is given of the properties of the azoic coupling component, Naphthol AS-FGGR, which is a phthalocyanine derivative. Photos, photomicrographs, graphs, table, 6 refs.

HOW TO DYE DACRON/WOOL PIECE GOODS. C. T. Worthen (Sandoz, Inc.). Modern Textiles Mag. 41: 30 (Apr. 1960). (1985)

Recommended procedures for beck dyeing with a carrier and for pressure dyeing are described.

DYEING OF BLENDS CONTAINING NEW CHEMICAL FIBERS. PART 1. BLENDS WHERE PROCESSING METHODS ARE STANDARDIZED. PART 2. BLENDS WHERE NEW APPROACHES HAVE RECENTLY EVOLVED. J. A. Leddy (Geigy Chem. Corp.). Can. Textile J. 77: 45-58 (Apr. 15, 1960). (1986)

Part 1 covers the salient features in the dyeing of Dacron/rayon, worsted, or cotton, Arnel/cotton, and Acrilan/rayon blends. Part 2 deals with the I. T. (Irgasol DA-Tinegal NA) method of dyeing acrylic blends. A table covering the fastness of Maxilon dyes on acrylic fibers is included. Diagrs, tables.

DIFFUSION PROCESSES IN KERATIN. J. A. Medley (Wool Inds. Research Assoc.). Dyer 123: 565 (Apr. 8, 1960). (1987)

The fundamental transfer processes of dyes in wool as they are related to the diffusion of simple ions are discussed.

DYEING OF NYLON WITH DISPERSE PROCINYL DYES. H. Seaman (Imp. Chem. Inds. Ltd). Dyer 123: 525, 527 (Mar. 25, 1960). (1988)

The Procinyl dyes combine the attractive dyeing properties of disperse dyes with the excellent washing fastness of reactive dyes. Their dyeing properties and application are outlined.

IS STREAKLESS DYEING OF CONTINUOUS NYLON FILAMENT POSSIBLE WITH ACID AND PREMETALIZED DYES? J.-B. Robin. Teintex 25, No. 1: 7-19 (1960). In French. Through BCIRA 40: 1020 (1960). (1989)

In this review, the author discusses the difficulties encountered during dyeing of nylon articles from continuous filaments with acid or premetalized dyes, the theories interpreting the dyeing mechanism (relationship between affinity and diffusion coefficient), and the action of dye assistants (acids, salts, swelling agents and anionic, nonionic, and cationic surface-active agents). The method developed by the Rhodiaceta laboratories is outlined. 31 refs.

EFFECT OF CARRIERS DURING DYEING OF POLYESTER FIBERS. E. Elöd. Melliand Textilber. 41, No. 2: 195-199 (1960). In German. Through BCIRA 40: 1022 (1960). (1990)

In this preliminary report, the author shows on the basis of spectrophotometric studies that no complex is formed between the dye and the carrier and that the latter causes permanent changes in the micro-structure of the polyester fibers by acting as loosening agent and rendering the fibers more accessible to the penetration of dyes. The loosened fiber (pretreated with the carrier in solution or emulsion) can be subsequently dyed without the addition to or presence of the carrier in the dyebath. When used at high concentrations, especially in the presence of dyes, the carrier affects adversely the skin zones of the fibers, an outer layer being formed which is impermeable to the dyes.

DYEING OF VINYLON WITH DIRECT DYES. PART 1. RELATION BETWEEN SALT-DYE RATIO p AND SUBSTANTIVITY RATIO q. PART 2. DYEING IN ABSENCE OF SALT. A. Katayama, N. Kuroki, and K. Konishi. J. Soc. Textile Cellulose Inds. Japan 15, No. 12: 1007-1014 (1959). In Japanese (English summary). Through BCIRA 40: 1025 (1960). (1991)

The equilibrium absorptions of Direct Yellow 12, Direct Red 1, and Direct Red 2 were examined at 90° C. The results for Direct Yellow 12 do not agree with direct dyeing theory (straight line logarithmic p, q plot), and the effect of presence or absence of salt is discussed and examined.

STAR PAPER TO CLOTH PRINTING PROCESS. K. Lowit. Textile Merc. 142: 482-484 (Apr. 8, 1960). (1992)

The Star printing process described is a two-phase process which prints textile colors on paper using paper printing machinery and then transfers the design from paper to cloth.

ONE-BATH METHODS FOR DYEING ACRYLIC FIBER/WOOL UNIONS. H. Stern (Ciba Ltd). Ciba Rev. 12, No. 136: 42-43 (Feb. 1960). (1993)

NEW METHOD FOR DYEING VISCOSE RAYON FABRICS. M. M. Gershov and Y. M. Veits. Tekstil. Prom. 19, No. 11: 76-77 (1959). In Russian. Through BCIRA 40: 774 (1960). (1994)

In the new method described, the scouring (in the presence of wetting agent and silicate), bleaching (if necessary), and dyeing are carried out in one operation. It is claimed that the number of redyeings is in this way reduced, and the quality of the dyeings improved.

CAKE DYEING WITH REACTIVE DYES: CORRECT APPLICATION OF HOT DYES. T. Flanagan (Brit. Enka Ltd). Man-Made Textiles 37: 57-58 (Apr. 1960). (1995)

Results of experimental work on the exhaustion dyeing of continuous filament viscose rayon with Cibacron dyes are reported.

DEVELOPMENTS IN DYEING MACHINERY: 1959-60. Dyer 123: 447-454 (Mar. 11, 1960). (1996)

PUTTING COLOR INTO TUFTED CARPETS. PART 2. R. C. Cheetham (Courtaulds Ltd). Skinner's Silk & Rayon Record 34: 283-286 (Mar. 1960). (1997)

The most commonly used blends and their dyeing, effect of oils in pile yarns and backing cloth on soiling, and backings for tufted carpets are discussed. Photos, 7 refs.

DYEING PASTEL SHADES WITH MICROFIX COLORS BY THE NEW ONE-BINDER MICROFIX PROCESS. T. Weber (Ciba Ltd). Ciba Rev. 12, No. 136: 40-42 (Feb. 1960). (1998)

The Microfix pigment dyeing process offers an extremely simple means of producing dyeings of outstanding all-round fastness, in very pale shades, in no more than four stages: padding, drying, curing, and calendering.

CIBACRON DYES IN THE PAD-JIG PROCESS: INFLUENCE OF COMMON SALT AND GLAUBER'S SALT. Ciba Ltd. Ciba Rev. 12, No. 136: 47 (Feb. 1960). (1999)

Medium depth and heavy shades dyed by the pad-jig process should be fixed in the presence of Glauber's salt and not common salt. The difference in the effect on yield only holds good for the pad-jig process, but not the exhaustion method.

DYEING BEHAVIOR AND MATURITY OF COTTON. PART 2. EFFECT OF MATURITY ON THE DYEING KINETICS WITH DIRECT DYES. R. Crespo. Investigacion e Informacion Textil 2, No. 3: 189-200 (1959). In Spanish. Through BCIRA 40: 1018 (1960). (2000)

The experiments described were carried out to study the differences in dye absorption and the time required for the dye concentrations to level out on cotton fibers with different degrees of maturity, as well as the effects of some variables (salt concentration in the dyebath, bath:fiber ratio, dyeing temperature) on the differential adsorption and migration of the dyes. (For Part 1 see abstr. 4217/59).

PAD-ROLL DYEING SYSTEM: SUMMARY OF EXPERIENCE. R. Kern (Sandoz AG). J. Soc. Dyers Colourists 76: 173-178 (Mar. 1960). (2001)

The results obtained in practical trials with the pad-roll dyeing system are described. Fabrics composed of cellulosic, polyamide, polyester, and acetate fibers have been dyed with direct and disperse dyes, and some trials have been made with acrylic fibers and wool, as well as with blended fiber fabrics. Methods for overcoming some practical difficulties are described. 2 refs.

EXAMINATION OF BENTONITE/CELLULOSE AND BENTONITE/DYE SYSTEMS, WITH SPECIAL REFERENCE TO THE NATURE OF BINDING FORCES. I. Rusznak, L. G. Bercsenyi, and E. Daras. Textil-Praxis 15, No. 1: 63-68 (1960). In German. Summary in BCIRA 40: 1017 (1960). (2002)

HOW TO PRINT ACRILAN FABRICS. B. Ajdukiewicz (Chemstrand Corp.). Textile World 110: 79-81 (Apr. 1960). (2003)

Recommendations for the printing of 100% Acrilan fabrics, Acrilan/wool, and Acrilan/rayon are given.

RECENT DEVELOPMENTS IN ROLLER PRINTING MACHINERY. H. P. Mather (Mather & Platt Ltd). Textile Merc. 142: 479-480 (Apr. 8, 1960). (2004)

STEAMERS FOR PRINTED FABRICS. T. A. Uthwatt (Mather & Platt Ltd). Textile Merc. 142: 480-482 (Apr. 8, 1960). (2005)

Machines primarily suitable for vat printing by the one and two phase process are discussed.

RELATIONSHIPS BETWEEN LIGHTFASTNESS AND DYE CONSTITUTION IN DEPENDENCE OF THE SUBSTRATE. D. Bitzer and H. J. Brielmayer. Melliand Textilber. 41, No. 1: 62-64 (1960). In German. Through BCIRA 40: 1014 (1960). (2006)

The lightfastness of basic dyes is shown to be affected by functional acid groups present in solvents or introduced during modification of cotton cellulose. A considerable lightfastness improvement of fluorescent basic dyes was obtained by dissolving them in acetic acid and adding to the solution, before exposure to light, small amounts of fluorescence extinguishers (e.g. phenol, resorcin, hydroquinone, etc.). Experiments in acetic acid on nonfluorescent basic triphenylmethane and heterocyclic dyes also gave positive results in the case of yellow, red, and violet shades. By suitable chemical modification, it was possible to fix several of the fluorescence extinguishers on fibers, e.g. cotton fibers, and to obtain in most cases considerably improved lightfastness. The investigations are still in progress.

ASPECTS OF PIGMENT DISPERSION RELATED TO USAGE. I. S. Moll (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 76: 141-150 (Mar. 1960). (2007)

Against a background of fundamental pigment properties, selected technological effects related to pigment dispersion in pigment printing, printing inks, and emulsion paints are discussed. Consideration of the separate aspects shows the broad pattern of dispersion behavior existing in both aqueous and nonaqueous media. Photos, photomicrographs, graphs, 10 refs.

FASTNESS OF COLORED FABRICS TO LIGHT. A. J. Hall. Textile Recorder 77: 49-51, 56, 58 (Apr. 1960). (2008)

The effect of such factors as humidity, sunlight, temperature, oxidation, moisture, and the chemical reactivity of dyes, as disclosed by recent research, is reviewed. Graphs.

PHYSICAL STATE OF DIRECT DYES IN VISCOSE RAYON AND ITS INFLUENCE ON LIGHTFASTNESS. C. M. Whittaker. (Letter to the editor). J. Soc. Dyers Colourists 76: 185 (Mar. 1960). (2009)

GAS FADING IN DYED TEXTILE MATERIALS. Celanese Corp. Man-Made Textiles 37: 59 (Apr. 1960). (2010)

The use of an addition polymer of ethylene carboxylic acid in spinning polyester and acetate fibers while improving their properties causes gas fading. This difficulty is obviated by subjecting the carboxylated polymer to the action of an oxidizing agent.

Mechanical processes D3

ROTARY FABRIC PRESS. Arthur Heaton & Co. Ltd. Textile Recorder 77: 69, 71 (Apr. 1960). (2011)

Increased speed of operation, extremely sensitive control of finish over a wide range of requirements and complete reproducibility of conditions are claimed for the fully automatic continuous rotary press described.

Drying, setting, conditioning D4

NEW FINDINGS IN VISCOSE RAYON STAPLE DRYING. E. Kiefer. Reyon Zellwolle Chemiefasern 9, No. 12: 788-789 (1959). In German. Through BCIRA 40: 1047 (1960). (2012)

In order to overcome the difficulties encountered during drying of viscose rayon staple tufts and render the drying process independent of the air conditions in the dryer, it was found of advantage to condition the three fresh-air supplies prior to feeding them to the perforated drum dryer in the course of the drying process, and to maintain in this way a constant humidity. The dryer is thereby subdivided into a predrying zone and two afterdrying zones.

STUDIES ON THE HEAT SETTING OF SYNTHETIC FABRICS. PART 1. EFFECT OF SOME SETTING CONDITIONS ON DIMENSIONAL STABILITY. K. Sasaki, K. Ban, and K. Imai. Bull. Textile Research Inst. (Japan) No. 51: 47-55 (1959). In Japanese (English summary). Through BCIRA 40: 1040 (1960). (2013)

Nylon 6 taffeta was examined. The dimensional stability is measured by the temperature of after-washing at which heat-set (hot water, dry air, superheated steam) samples shrink about 1% in length.

FLEISSNER PERFORATED DRUM DRYER FOR KNITTED FABRICS. P. Hielle (Fleissner Ltd). Hosiery Times 33: 51-52 (Apr. 1960). (2014)

The requirements of a dryer for knit fabrics are noted, and the operating principle of the Fleissner dryer is described. Diagrs.

DRYING: AN I/EC UNIT OPERATIONS REVIEW. P. Y. McCormick (E. I. du Pont de Nemours & Co.). Ind. Eng. Chem. 52: 439-440 (May 1960). (2015)

A review with 33 references.

HIGH SPEED MULTI-DECK DRYER WITH AIR JET NOZZLES. P. Zanké. Melliand Textilber. 41, No. 2: 206-209 (1960). In German. Through BCIRA 40: 1046 (1960). (2016)

The improved construction of the Krantz dryer and its advantages are discussed.

TESTING AND MEASUREMENT E

PREPARATION OF TEXTILE MICROTOME SECTIONS AND CAST RESIN BLOCKS WITH NEW EMBEDDING AGENTS. K. Nettelnstroth, G. Schmidt, and T. Loske. Melliand Textilber. 41, No. 2: 133-135 (1960). In German. Through BCIRA 40: 1084 (1960). (2017)

Various types of polyester cast resins (Leguval and Palatal types) are examined as to their suitability in the preparation of microtome sections for microscopical examination. The textile material is embedded in cast resin blocks which, when ground and polished, permit three-dimensional examination.

Fibers E1

PROVING GROUND FOR FIBERS. C. M. Alberto (Dow Chem. Co.). Textile Inds. 124: 156-158 (Apr. 1960). (2018)

The purposes and facilities of the Dow textile product evaluation department are briefly described. Photos.

SIMPLE ANALYSES FOR THE QUALITATIVE DETERMINATION OF THE MOST USED FIBERS. F. Tucci. SVF Fachorgan Textilveredlung 15, No. 1: 18-21 (1960). In German. Through BCIRA 40: 1073 (1960). (2019)

A table is given listing the solvents and reagents, as well as identification and staining reactions, for acetate, triacetate, Dynel, Rilsan, nylon 66, nylon 6, polyvinyl chloride, polyester, polyacrylonitrile, glass, asbestos, natural silk, wool, cotton, viscose rayon and cuprammonium rayon. Preparation of the samples and the identification tests are briefly described.

STUDIES ON THE VISCOELASTIC BEHAVIOR OF HIGH POLYMER SOLIDS. PART 1. RELATION BETWEEN BREAKING PHENOMENA AND CROSS-HEAD SPEED. M. Ohira, S. Ikeda, and H. Iino. Bull. Textile Research Inst. (Japan) No. 51: 37-42 (1959). In Japanese (English summary). Through BCIRA 40: 1071 (1960). (2020)

The effect of rate of extension on the stress-strain curves of various fibers and yarns was investigated.

MINIATURE SPINNING TEST FOR COTTON. F. Dunkerley (Egyptian Testing House). (Letter to the editor). Textile Research J. 30: 238 (Mar. 1960). (2021)

Method used for a spinning test using 80 g samples is briefly outlined.

METHODS FOR MEASURING THE LENGTH OF STAPLE FIBERS. H. Dittman and K. Geitel. Faserforsch. u. Textiltech. 10, No. 11: 519-527 (1959). In German. Through BCIRA 40: 1070 (1960). (2022)

Methods for measuring the staple length of single fibers are examined as to their accuracy and reproducibility, comparison being made especially between the Johannsen-Zweigle and the WIRA methods; the latter has been found most satisfactory. The findings on viscose staple fibers are probably also applicable to other staple fiber (polyamide, polyester, polyacrylonitrile fibers). Results of experiments on flock and sliver from rayon staple fiber are tabulated.

QUANTITATIVE SEPARATION OF WOOL AND PERLON IN MIXED TEXTILES. M. Kehren. SVF Fachorgan Textilveredlung 15, No. 1: 13-18 (1960). In German. Through BCIRA 40: 1078 (1960). (2023)

Chemical methods for the quantitative determination of the components in binary fiber mixtures are reviewed, with special reference to the behavior of pure Perlon and wool fibers to various concentrations of sodium hypochlorite solutions and the separation of wool/Perlon blends by the hypochlorite method.

TESTING OF TEXTILES: DETERMINATION OF THE WATER RETAINING ABILITY OF FIBERS AND FILAMENTS. German Standards Comm. Melliand Textilber. 41, No. 1: 103-104 (1960). In German. Through BCIRA 40: 1072 (1960). (2024)

The German draft specification DIN 53814 gives a description of the method (sampling, sample preparation, number of samples, apparatus, calculation, and test report) for determining the water retention of fibrous material wetted in water under certain testing conditions.

Yarns E2

INTRODUCTION OF THE TEX SYSTEM FOR DESIGNATION OF YARN NUMBER. Am. Soc. for Testing Materials, Comm. D-13 on Textiles. 1960. Available from American Soc. for Testing Materials, 1916 Race St., Philadelphia 3, Pa. Free. (2025)

This memorandum proposes the adoption of the first stage of the program for the introduction of the tex yarn numbering system by the textile industry of the United States. The proposal suggests, as a first stage, including rounded equivalent tex numbers in parentheses after the traditional numbers wherever they are written or printed.

ABRASION BY NYLON FILAMENTS. W. G. Settele. SVF Fachorgan Textilveredlung 15, No. 1: 62-66 (1960). In German. Through BCIRA 40: 1083 (1960). (2026)

For measuring the abrasion ability of nylon threads, a method was developed which consists in passing a certain length of the thread, at a certain angle and a certain constant tension and velocity, over the edge of a thin silver plate and determining the abrasion of the silver plate by weighing or by planimetry of the photographically magnified wear traces. The method is described in detail, and the effects of various factors (spinning oil and sizing agent, titanium dioxide, and fineness and twist of the filament) on the degree of abrasion are examined.

EVALUATION OF ABRASION TESTS ON YARN. H. Güttler. Textil-Praxis 14, No. 12: 1208-1212 (1959). In German. Through BCIRA 40: 1082 (1960). (2027)

Statistical evaluation of abrasion tests is discussed and diagrams and tables are given. A logarithmic classification which includes all measuring values is explained by an example.

DESIGNATION OF THE STRUCTURE OF YARNS. J. Textile Inst. 51: P87-P92 (Feb. 1960). (2028)

Tentative textile standard no. 62 provides a method for specifying the structure of all yarns produced by twisting processes, in terms of linear density, number of plies (or filaments), direction and amount of twist, constituent fibers, and any other features necessary for a complete description of a yarn. Diagrs.

TWIST DIFFERENCES DURING YARN TESTS. S. Gruoner. Melliand Textilber. 41, No. 2: 136-140 (1960). In German. Through BCIRA 40: 1080 (1960). (2029)

The main causes of twist variations in the yarn, and the resulting differences in the test results obtained according to the test length, as well as statistically reliable variation limits, are discussed. It is shown that the range of the individual test values and the corresponding test lengths are of decisive importance for the end results.

Fabrics E3

DIMENSIONAL CHANGES IN WOVEN OR KNITTED TEXTILES (EXCLUDING WOOL). AATCC Comm. on Dimensional Changes in Textile Fabrics. Am. Dyestuff Reptr. 49: P266-P271 (Apr. 18, 1960). (2030)

This test method is intended for determining the dimensional changes of woven or knitted fabrics, made of fibers other than wool, to be expected when the cloth is subjected to laundering procedures commonly used in the commercial laundry and the home. Photos, diagr, tables.

RELAXATION AND FELTING SHRINKAGE OF WOVEN OR KNITTED WOOL TEXTILES. AATCC Comm. on Dimensional Changes in Textile Fabrics. Am. Dyestuff Reptr. 49: P284-P285 (Apr. 18, 1960). (2031)

This method is an accelerated test for determining the relaxation and felting shrinkage of woven and knitted textiles containing at least 50% wool which has been treated to render the wool shrink-resistant. Table.

SHAKING PROBLEM DURING THE SPRAY TEST. H. Bundesmann. Melliand Textilber. 41, No. 2: 217-220 (1960). In German. Through BCIRA 40: 1090 (1960). (2032)

Experiments have shown that the results obtained in the spray test (Bundesmann method) are generally in good agreement within one testing station (difference 2-3%), whereas the values obtained in different testing stations show varying differences (up to 25%). These large variations may be due to the state of the apparatus, inaccurate test conditions, or method of shaking the wet samples. Suggestions are made for improving the reproducibility of the results by the use of a test fabric or mechanical devices.

MEASUREMENT OF THE SURFACE AREAS OF FABRICS. W. C. Wake, R. S. Khot, and S. P. Gundavda (Research Assoc. Brit. Rubber Mfrs.). Trans. Inst. Rubber Ind. 35: 159-165 (1959). Through Chem. Abstr. 54: 8090 (1960). (2033)

Surface areas of fabrics can be measured by (1) surface projection in which fabric folds are silhouetted at different points in a microscope, projected and measured with a map reader, (2) depositing Ag from ammoniacal $AgNO_3$ and treating with dilute H_2O_2 to estimate Ag, (3) dyeing 1 min at 80° in dilute solutions of Chlorazol Sky Blue FF for viscose and nylon, Solacet Fast Scarlet B for nylon and Terylene, and determining takeup relative to a thin film of the same polymer, (4) centrifuging proofed or plain fabrics swollen in H_2O or absolute alcohol to determine relative liquid retention, and hence amount of fabric covered by rubber.

TESTING OF TEXTILES: DETERMINATION OF AIR PERMEABILITY OF TEXTILE FABRIC. German Standards Comm. Melliand Textilber. 41, No. 1: 105 (1960). In German. Through BCIRA 40: 1086 (1960). (2034)

The German draft specification (DIN 53 887) proposes for standardization a method for determining the air permeability of textile fabrics which have to show during use a greater or lesser porosity (e.g. technical fabrics, inlet materials, clothing materials, etc.). The method and apparatus, evaluation of the results, and items to be included in the test report are described.

DETERMINATION OF SHRINKAGE OF WOVEN COTTON AND LINEN FABRICS DURING LAUNDERING. A. N. Davidson and H. M. Taylor. J. Textile Inst. 51: P151-P166 (Mar. 1960). (2035)

This review is based on experiments carried out by Technical Committee E1 of the Textile Institute during the years 1939-1942 and 1945-1951 and on the statistical analysis made by H. E. Daniels in 1941 and by H. M. Taylor in 1951. Tables.

DEVELOPMENT OF A NEW TEST METHOD FOR COLORFASTNESS TO DRYCLEANING. AATCC Comm. on Drycleaning Test Methods. Am. Dyestuff Reptr. 49: P264-P266 (Apr. 18, 1960). (2036)

This test indicates the effect of repeated drycleanings on the color or colors in dyed and printed fabrics and other materials. It is also applicable for evaluating dyestuffs and other coloring materials manufactured for use on fibers, yarns, fabrics, and all other products intended for apparel or household use which are renovated in consumer service by commercial drycleaning procedures.

VIEWS ON THE BUNDESMANN SPRAY TEST. H. Machemer and L. Hintz. Melliand Textilber. 41, No. 1: 86-87 (1960). In German. Through BCIRA 40: 1089 (1960). (2037)

With a view to ascertaining the extent and causes of the scattering of Bundesmann values and the variation amplitude in repeated tests, the authors investigated the effect of various factors on the water uptake (differences between two testers, uniform impregnation in warp and weft direction, friction on the back of uniformly moving fabric samples, change in the duration of spraying, water hardness and temperature). The results are discussed and it is concluded that in spite of the interlaboratory differences, it is not possible to replace the Bundesmann test by any other method.

MEASUREMENT OF THE MOISTURE CONTENT ON MOVING FABRIC WEBS. O. König. Textil-Praxis 14, No. 12: 1250-1256 (1959). In German. Through BCIRA 40: 1048 (1960). (2038)

The methods described refer to measurements of: the electrostatic charge on the web, dielectric constant, conductivity (ohmic resistance), the latter being determined by the classical method or by means of a controlled electric charge applied to the fabric. The last mentioned method makes it possible to determine the moisture on any fabric section quickly and accurately.

EVALUATION OF ABRASION RESISTANCE TESTS ON CLOTHING FABRICS. F. Izmay. Faserforsch. u. Textiltech. 10, No. 11: 514-519 (1959). In German. Through BCIRA 40: 1087 (1960). (2039)

Methods for the evaluation of abrasion resistance of clothing fabrics are reviewed with a view to determining their wear value. Special attention was paid to the changes taking place in the tensile strength, weight, thickness and loss of nap in the abraded fabrics.

DRY AND WET CROCKING FASTNESS OF COLORED OVERALLS. M. Kehren and L. Brandt. Melliand Textilber. 41, No. 1: 78-80 (1960). In German. Through BCIRA 40: 1092 (1960). (2040)

Since dark-dyed overalls (cotton and rayon) show a satisfactory dry crocking fastness but their wet crocking fastness does not reach the high value demanded, it is proposed either to omit completely the determination of wet crocking fastness in the case of dark shades produced by all dye groups (except in the case of rainwear and upholstery fabrics) or to lower the standard values according to the technical possibilities.

DEVELOPMENT OF A METHOD FOR DETERMINING THE TENSILE STRENGTH OF FELTS. M. Weclawowicz. Prace Inst. Wlok. 9, No. 2(31): 59-75 (1959). In Polish. Through BCIRA 40: 1096 (1960). (2041)

The method used hitherto for testing the strength of felts permits only determination of the conventional properties depending upon the testing technique used. The new method described, which eliminates the effect of clamps on the test results, makes it possible to determine the physical felt properties which depend upon its structure and the degree of felting.

CREASING PROPERTIES OF WORSTED CLOTH MADE FROM BLENDS OF WOOL, STAPLE FIBER, AND SYNTHETIC FIBER. B. Sziraki. Textil-Praxis 14, No. 12: 1276-1278 (1959). In German. Through BCIRA 40: 1097 (1960). (2042)

The new device developed in the Hungarian Research Institute of the Textile Industry can be used to test 5-10 samples simultaneously. The latter are placed on the specimen table of the apparatus and, after folding, covered by a transparent Plexiglas plate, compressed by applying a certain specific pressure and then released, the procedure being repeated several times. The moment of relaxation and the completed crease recovery are indicated by a built-in signalling device. The reading of the crease recovery angle is effected mechanically to eliminate subjective errors. The error resulting from compressing all the samples with a single pressure plate, if the fabrics vary in thickness, is claimed to be negligible. The results are accurate and reproducible.

TESTING THE WET CREASING ANGLE BY THE MONSANTO-QUEHL METHOD. Melliand Textilber. 41, No. 1: 80-82 (1960). In German. Through BCIRA 40: 1088 (1960). (2043)

A comparison is made between the Tootal method (and its modifications) and the Monsanto-Quehl method for measuring the wet crease resistance of wash-and-wear fabrics.

Other E4

DETERMINATION OF COLORFASTNESS TO DRY HEAT PLEATING AND SETTING. J. Soc. Dyers Colourists 76: 158-168 (Mar. 1960). (2044)

The possibility of using existing tests for the measurement of colorfastness to dry heat setting, or pleating, is discussed. A new test for measuring colorfastness to dry heat setting and pleating is described, and factors influencing the results obtained with the new test have been investigated. The new test has been compared with other proposed tests for measuring colorfastness to dry heat setting and pleating and good agreement has been found. Photos, diagrs, tables, 6 refs.

ATTEMPTS TO STANDARDIZE THE TESTING METHODS FOR TEXTILE ASSISTANTS. PART 17. RAPID METHOD FOR DETERMINING THE FAT CONTENT IN TEXTILES. M. Rösch. Melliand Textilber. 40, No. 12: 1462-1464 (1959). In German. Through BCIRA 40: 591 (1960). (2045)

The method and apparatus described (previously reported in abstr. 1376/59) give results that are in good agreement with those obtained by the Soxhlet method, about 87% of the values obtained by both methods differing from each other by not more than 0.1%.

MILL MANAGEMENT F

HOW TO USE BREAK-EVEN CHARTS IN MAKING MANAGEMENT DECISIONS. S. A. Tucker (Martin & Tucker). Textile Bull. 86: 35-37 (Apr. 1960). (2046)

Break-even charts test in advance the effect of management's decisions. Using the charts, a firm's probable business course can be charted and the impact of certain moves and changes prejudged. The charts tell: impact of price reductions; effect of adding equipment; impact of increasing staff; effect of change in product diversification; how and when to marginally price; etc. Graphs.

IMPLICATIONS OF REEQUIPMENT. PART 2. R. Hodara. Textile Weekly 60(1): 693, 715-716 (Mar. 18, 1960). (2047)

Maintenance organization, effect on labor productivity, and quality levels are discussed.

DESIGN IN THE TEXTILE INDUSTRY. Textile Weekly 60(1): 745-781 (Mar. 25, 1960). (2048)

Case for design in industry, p. 745; Design in relation to factory layout, p. 746-753; Design and fashion, p. 755-756; Industrial design in engineering, by R. M. Kay, p. 759-763; Design and textile machinery, p. 765-766; Putting industrial design into practice, by W. L. Mather, p. 766-772; User's approach to textile machinery design, by G. Waggett, p. 772-776; Some examples of design in practice, p. 779-781.

Industrial engineering F1

SHIFT WORKING IN THE SPINNING MILL. J. K. Clegg. Textile Recorder 77: 55-56 (Apr. 1960). (2049)

Some of the factors involved in a changeover from the single shift traditional in Lancashire cotton spinning mills to multishift working are discussed.

PRODUCTION PLANNING AND CONTROL. L. Bellwood. Wool Rev. 33: 17 (Feb. 1960); 29 (Mar. 1960); 20 (Apr. 1960). (2050)

Part 1. Production planning. Part 2. Planning points and machine loading. Part 3. Visible loading charts.

IMPORTANCE OF PRODUCTION TIME DETERMINATION FOR COST CALCULATION. W. Allerdissen. Melliand Textilber. 41, No. 2: 233-240 (1960). In German. Through BCIRA 40: 1142 (1960). (2051)

Combination of time study and cost calculation, and the effect of production time on the cost of a production unit are discussed, examples being given for illustration.

MILL CHECK-UP. PART 3. SUPERINTENDENT INSPECTS PICKER-ROOM OPERATIONS. A. L. Landau. Textile World 110: 60, 144-145 (Apr. 1960). (2052)

Points of inspection in the picker room include: lap appearance, calendar section and loggerheads, evener motion and beaters, and fan and beater speeds.

HOW DAN RIVER ORGANIZED QUALITY CONTROL. W. L. Clement (Dan River Mills). Textile Bull. 86: 41-43, 77 (Apr. 1960). (2053)

Control testing procedures for yarn and fabric manufacturing are outlined.

QUALITY COST SURVEY. P. M. Felker (Wm. Carter Co.). Am. Textile Reptr. 74: 17-18, 40-41 (Apr. 21, 1960). (2054)

The quality cost survey is used as a basis of information for formulating a more effective quality control program by determining the difference between the cost of failure and the cost of prevention.

MULTIMACHINE ASSIGNMENTS. PART 6. DETERMINING THE MACHINE ASSIGNMENT. T. F. O'Connor. Modern Textiles Mag. 41: 33, 48 (Apr. 1960). (2055)

INDUSTRIAL COMPLEX ANALYSIS AND REGIONAL DEVELOPMENT: A CASE STUDY OF REFINERY-PETROCHEMICAL-SYNTHETIC-FIBER COMPLEXES AND PUERTO RICO. W. Isard, E. W. Schooler, and T. Vietorisz. Technol. Press of the Mass. Inst. Technol. 1959. 294 p. Regional science studies, v. 3. $8.75. (2056)

Data, analyses, and results illustrative of industrial growth in an underdeveloped region. The approach "combines an evaluation of interindustry relationships, along input-output lines, with an analysis of the factors that lead to regional differences in costs and revenues, along industry comparative-cost lines."

EXAMPLE FOR A PRODUCTIVITY-DEPENDENT WAGE IN ROLLER PRINTING. G. R. Heinrich. Melliand Textilber. 41, No. 2: 202-206 (1960). In German. Through BCIRA 40: 1030 (1960). (2057)

The possibilities of calculating the wages in dependence of the output are discussed, with reference to the economic factors facing the management of a printing plant.

EFFICIENCY OF AUTOMATIC WINDING MACHINES WITH CONSTANT PATROLLING TIME. A. J. Howie and L. R. Shenton. J. Roy. Statistical Soc. Ser. B, 21, No. 2: 381-395 (1959). (2058)

The problem is that of maximizing the average efficiency of a machine which (1) stops when its total running time has reached a fixed value a, (2) has accidental stops, and (3) is patrolled for servicing (i.e. restarting if necessary) at a fixed interval P which may be less than a, efficiency being defined as the ratio of the running time to the total time under consideration. The probability distribution of the number of patrols required to exhaust the total running time of the machine is derived in the case where the accidental stops have uniform probability, and is found to be expressible in terms of Laguerre polynomials. The properties of the distribution are illustrated by an example. Its asymptotic normality as a increases is established. The properties of the average efficiency are discussed. Graphs, 4 refs.

AN INDUSTRIAL WASTE GUIDE TO THE COTTON TEXTILE INDUSTRY. AATCC, Nat. Stream Sanitation Comm. and Nat. Tech. Task Comm. on Industrial Wastes. U. S. Public Health Serv., Washington, D. C. 1959. 23 p. Public Health Serv. pub. no. 677. Available from Superintendent of Documents, Washington 25, D. C. 25¢. (2059)

This publication is intended primarily to assist the operators and managers of cotton textile processing plants to utilize, reduce, and otherwise suitably dispose of their waste waters. Contents: introduction; description of process; sources, characteristics, and pollution effects of process wastes; remedial measures; the solution of specific waste problems; summary; and bibliography (59 refs.).

WASTE WATERS OF THE TEXTILE INDUSTRY. A. Cerny. LitBer. Wass. Abwass. Luft u. Böden 7: 219-220 (1958). In German. Through Water Pollution Abstr. 33: 169 (Jan. 1960). (2060)

The preparation of natural and artificial fibers, the waste waters produced, and their treatment are described. The effect of local conditions on the type of treatment plant required, and the necessity for retention tanks and controlled discharge are explained. At a weaving mill with dye works and finishing plant, waste waters were settled, mixed, and stored for regulated discharge over 24 hr; when the stream was low waste waters containing sodium sulfide were treated with ferrous sulfate for removal of sulfur; exceptionally dark dye baths were coagulated with aluminum sulfate. At a cotton weaving and dyeing plant using a groundwater supply, mercerizing waste waters were treated by sedimentation and filtration and discharged to a seepage shaft 120 m from the well. Phenolic tastes were caused in the water by a preparation used for mercerizing and persisted for almost a year after use of the preparation had been stopped.

Plant and equipment F2

REVIEW OF MACHINERY DEVELOPMENTS DURING 1959. Textile Merc. (Annual Trade Review Suppl.): 39-47, 72-73 (Mar. 1960). (2061)

INDUSTRIAL DESIGN AND TEXTILE MACHINERY. Textile Weekly 60(1): 826-840 (Apr. 1, 1960). (2062)

Survey of technological trends, by V. Duxbury, p. 826-831; Role of industrial designer, by M. Black, p. 831-832; Discussion at the conference, p. 832-840.

MAGNETIC POWDER COUPLING AND ITS USE IN THE TEXTILE INDUSTRY. F. Lammers. Melliand Textilber. 41, No. 1: 7-10 (1956). In German. Through BCIRA 40: 1101 (1960). (2063)

The construction and mechanism of AEG magnetic powder couplings, and their use as starting, switch and control, and reversing clutches on textile machinery are described.

TECHNOLOGICAL TRENDS IN RELATION TO TEXTILE MACHINERY DESIGN. V. Duxbury (Manchester Coll. Science & Technol.). Textile Merc. 142: 487-490, 492 (Apr. 8, 1960). (2064)

POLY-V DRIVING BELT. Turner Bros. Asbestos Ltd. Textile Weekly 60(1): 672 (Mar. 18, 1960). (2065)

The belt is, in effect, a flat belt with a series of parallel V-shaped ribs molded on its inner surface. It combines the simplicity, flexibility, and strength of the flat belt with the higher speeds, wider speed ratios, shorter center distance, and freedom from slip of the V-belt drive. Textile applications are noted. Photos.

V-BELT DRIVE DESIGN. Turner Bros. Asbestos Co. Ltd. Textile Weekly 60(1): 842, 845 (Apr. 1, 1960). (2066)

The factors influencing size and number of belts are discussed.

TEXTILE MILL MAINTENANCE. PART 4. F. H. Slade. Textile Mfr. 86: 89-94 (Mar. 1960). (2067)

Faults that can arise in air compressor and motor operation, symptoms of these faults, and remedial action that may be taken are discussed, and general maintenance procedures are described. Diagrs, tables.

PROVIDING ELECTRICAL CONTROL FOR SMALL DUAL FUEL BOILERS. P. K. Ryder (Electronics Corp.). Textile Bull. 86: 65-70 (Apr. 1960). (2068)

The basic functions of, as well as component devices used in, the control system of a dual fuel fired burner are described. Diagrs.

ACCIDENT PREVENTION PROGRAM. Union Asbestos & Rubber Co. Textile Inds. 124: 142-144 (Apr. 1960). (2069)

Safety program details are outlined. Photos.

SCIENCES G

Chemistry G1

INFLUENCE OF SELECTED METAL TRACES ON THE COLOR AND COLOR STABILITY OF PURIFIED COTTON LINTERS. T. P. Czepiel (Inst. of Paper Chemistry). Tappi 43: 289-299 (Apr. 1960). (2070)

The purpose of this investigation was to observe and interpret the effects of small amounts of selected metal salts upon the color and color stability of paper handsheets made from a highly purified cotton linters pulp. Diagrs, graphs, tables, 39 refs.

INFRARED SPECTRA OF CELLULOSE MODIFICATIONS. R. T. O'Connor, E. R. McCall, and D. Mitcham (So. Reg. Research Lab.). Am. Dyestuff Reptr. 49: 214-222 (Apr. 4, 1960). (2071)

The application of the KBr disc infrared absorption technique to the study of various chemical modifications of cotton is described. Graphs, 37 refs.

REVIEW OF FUNDAMENTAL DEVELOPMENTS IN ANALYSIS: INFRARED SPECTROSCOPY. R. C. Gore. Anal. Chem. 32: 238R-240R (Apr. 1960). (2072)

A review with 96 references.

REVIEW OF DETERGENT RESEARCH PROGRAM. P. J. Weaver (Procter & Gamble Co.). J. Water Pollution Control Fed. 32: 288-296 (Mar. 1960). (2073)

The research program of the Assoc. of Am. Soap and Glycerine Producers, Inc., is reviewed under the headings: research organization, detergent definitions, analytical problems, sewage treatment problems, water treatment problems, and other activities. 12 refs.

A STUDY OF THERMAL DEGRADATION AND OXIDATION OF POLYMERS BY INFRARED SPECTROSCOPY. PART 1. EXPERIMENTAL TECHNIQUE AND BUTYLATED MELAMINE FORMALDEHYDE AND UREA FORMALDEHYDE. J. H. Lady, R. E. Adams, and I. Kesse (Westinghouse Research Labs.). J. Appl. Polymer Sci. 3: 65-70 (Jan./Feb. 1960). (2074)

This is the first of a series of papers concerned with the general problem of thermal degradation and oxidation of polymers. 10 refs.

GRAFTING ONTO CELLULOSE AND CELLULOSE DERIVATIVES USING ULTRAVIOLET IRRADIATION. N. Geacintov, V. Stannett, E. W. Abrahamson, and J. J. Hermans (Syracuse Univ.). J. Appl. Polymer Sci. 3: 54-60 (Jan./Feb. 1960). (2075)

The cellulose-tendering properties of anthraquinone-2,7-disulfonic acid disodium salt have been successfully applied to graft various vinyl monomers onto cellulosic materials. Graphs, tables, 12 refs.

RELATION BETWEEN THE NUMBER OF LANTHIONINE CROSSLINKS AND THE UREA-BISULFITE SOLUBILITY OF ALKALI-TREATED WOOL. B. W. Jones and P. T. Speakman (Leeds Univ.). J. Appl. Polymer Sci. 3: 43-46 (Jan./Feb. 1960). (2076)

Graphs, tables, 11 refs.

RHEOLOGICAL PROPERTIES OF SUSPENSIONS AND POLYMERIC SOLUTIONS. A. B. Metzner (Univ. of Delaware). Tappi 43: 300-305 (Apr. 1960). (2077)

The first part considers the properties of all known real fluids briefly and the relative position of coating stocks within this general spectrum of fluid behavior. The second and major portion of the paper discusses in detail the types of behavior exhibited by materials such as coating stocks. The measurement, interpretation, and use in design of these physical properties are discussed. Experimental data on both suspensions and polymeric materials are presented. 46 refs.

PROPERTIES OF TEXTILE MATERIALS. PART 9. CHEMICAL ATTACK OF TEXTILE FIBERS. PART 2. PROTEIN FIBERS: (A) WOOL. F. O. Howitt (Wool Inds. Research Assoc.). J. Textile Inst. 51: P120-P140 (Mar. 1960). (2078)

Following a discussion of the physical and chemical composition of wool fibers, the effect of various chemical reagents (e.g. acids, alkalis, oxidizing and reducing agents, salts, organic solvents, halogens, and cross-linking, esterification, acetylation, and acylation agents) is reviewed.

ESTIMATION OF SOIL REDEPOSITION BY DETERGENTS. PART 1. A. R. Martin and R. C. Davis (Whirlpool Corp.). Soap Chem. Specialties 36: 49-51, 109 (Apr. 1960). (2079)

Clay soil redeposition was studied in an effort to develop a satisfactory test procedure. Photomicrographs, graphs, tables, 4 refs.

UNIQUE SOAP BACTERIOSTAT. W. J. Lennon, T. E. Furia, and H. W. Zussman (Geigy Industrial Chemicals). Soap Chem. Specialties 36: 51-54, 93 (Mar. 1960); 56-58, 109 (Apr. 1960). (2080)

Tetrachlorosalicylanilide is a promising new microbiological control agent for use in soaps and detergent products, effective against fungi, Gram-positive and Gram-negative organisms. The compound may be used in toilet soap at 0.5%, also in shampoos and in scrub soap. Addition of 0.1-0.2% to laundry detergents will impart a residual bacteriostatic effect. TCSA's fluorescence offers a convenient method for detecting the compound. Graphs, tables, 5 refs.

EFFECT OF TEMPERATURE ON CRITICAL MICELLE CONCENTRATION. M. E. Ginn, F. B. Kinney, and J. C. Harris (Monsanto Chem. Co.). J. Am. Oil Chemists Soc. 37: 183-187 (Apr. 1960). (2081)

Measurements of cmc changes with temperature increase (at 25, 50, 75° C) were made by the dye solubilization technique for a series of sodium alkylbenzene sulfonates and several series of nonionic surfactants. Graphs, tables, 19 refs.

PERMEATION OF WATER VAPOR THROUGH POLYMERIC FILMS. J. E. Ayer, D. R. Schmitt, and R. M. Mayfield (Argonne Nat. Lab.). J. Appl. Polymer Sci. 3: 1-10 (Jan./Feb. 1960). (2082)

This investigation was carried out to determine the role of the conditions affecting the permeability of glove materials. Particular attention was placed upon the system governing the permeation of water vapor through vinyl, Hycar, and milled and latex neoprene films. 9 refs.

SURFACE-ACTIVE PROPERTIES OF SODIUM SALTS OF SULFATED FATTY ACID MONOGLYCERIDES. A. K. Biswas and B. K. Mukherji. J. Am. Oil Chemists Soc. 37: 171-175 (Apr. 1960). (2083)

Sodium salts of fatty acid monoglyceride sulfates have been prepared by sulfating purified monoglycerides with chlorosulfonic acid or a pyridine-sulfur trioxide complex and subsequent neutralizing. Surface tension, interfacial tension, wetting, suspending and foaming characteristics, calcium stability, and emulsifying property (including stability of the emulsion obtained) of the aqueous solution of these surfactants from C_{12}, C_{14}, C_{16}, and C_{18} saturated fatty acids and from oleic and linoleic acids have been determined and evaluated. Photo, graphs, tables, 16 refs.

EFFECT OF IODINE ON NYLON 66. J. E. Ford and J. O. Warwicker (Shirley Inst.). (Letter to the editor). J. Textile Inst. 51: T80-T82 (Feb. 1960). (2084)

Immersion of nylon 66 in an iodine solution markedly reduced the tenacity and increased the extensibility of the fibers. The phenomenon is attributed to a change involving disorientation and improved crystallinity. Photomicrographs, graph.

SURFACE TENSION OF VISCOUS POLYMERS AT HIGH TEMPERATURES. F. J. Hybart and T. R. White (Brit. Nylon Spinners Ltd). J. Appl. Polymer Sci. 3: 118-121 (Jan./Feb. 1960). (2085)

The maximum bubble pressure method for the determination of surface tension has been modified for use with thermally unstable, viscous, opaque polymers at high temperatures. A value of 35.1 dynes/cm was obtained for nylon 66 at 285° C. Diagrs, 16 refs.

FLAME-RESISTANT POLYMERS: POLYPHOSPHATES AND POLYPHOSPHONATES FROM DIHYDROXY AROMATIC COMPOUNDS. H. W. Coover, Jr., R. L. McConnell, and M. A. McCall (Tenn. Eastman Co.). Ind. Eng. Chem. 52: 409-411 (May 1960). (2086)

Condensation of dihydroxy aromatic compounds with phosphorus acid chlorides or with aromatic phosphorus esters was studied as a possible method of preparing flame-resistant polymers. Reactants, reaction conditions, catalysts, and physical properties of the polymer were studied. In general, the polymers were hard, brittle, and flame-resistant. Fibers could be drawn from some of them. Graphs, 24 refs.

FLAME-RESISTANT POLYMERS: POLYPHOSPHONAMIDES FROM PHOSPHONIC DIAMIDES. H. W. Coover, Jr., R. L. McConnell, and N. H. Shearer, Jr. (Tenn. Eastman Co.). Ind. Eng. Chem. 52: 412-414 (May 1960). (2087)

The heating of phenylphosphonic diamide above its melting point resulted in the liberation of ammonia and formation of a condensation product. The physical properties of these materials varied according to the curing temperature. Polyphosphonamides were also obtained when phenylphosphonic diamide or phenylphosphonic dichloride was condensed with urea or thiourea. Many of these polymers may be used as flameproofing agents for various materials and as light stabilizing agents for poly(vinyl chloride). Graphs, 9 refs.

THE DELTA-HYDROXYACIDS OF WOOL GREASE. C. S. Barnes. Australian J. Chem. 13: 184-186 (Feb. 1960). (2088)

MISCELLANY H

MOISTURE IN TEXTILES. J. W. S. Hearle and R. H. Peters. Textile Institute, Manchester, England. 1960. 203 p. Available from Textile Book Publishers, Inc., 250 Fifth Ave., New York 1, N. Y. $6.50. (2089)

Contents: Water and the atmosphere, by P. S. H. Henry, p. 1-9; Structure of fibers, by J. W. S. Hearle, p. 10-13; Sorption isotherms, by A. R. Urquhart, p. 14-32; Heat of absorption, by W. H. Rees, p. 33-58; Two- or three-phase adsorption theories, by G. King, p. 59-68; Theories of multi-layer adsorption, by G. King, p. 69-82; Rate of change of moisture content, by J. Crank, p. 83-93; Simultaneous diffusion of heat and moisture, by J. Crank, p. 94-105; Diffusion in fiber-forming substances, by J. Crank, p. 106-122; Moisture and electrical properties, by J. W. S. Hearle, p. 123-140; Effect of moisture on density and optical properties, by R. Meredith, p. 141-159; Effect of moisture on mechanical properties, by R. Meredith, p. 160-177; Fibres and liquid water, by J. W. S. Hearle, p. 178-188. References.

PERUVIAN TEXTILE TECHNIQUES. R. d'Harcourt. Ciba Rev. 12, No. 136: 2-40 (Feb. 1960). (2090)

Introduction, p. 2-6; Textile raw materials, spinning, dyeing, implements, p. 6-10; Woven fabrics, p. 11-22; Plaiting, p. 23-26; Netting, p. 27-30; Embroidery, p. 31-35; Surface decoration with feathers, metal sequins, tassels, and tufts, p. 36-39. Photos, diagrs, 19 refs.

MILL MANAGEMENT LOOKS AT TEXTILE RESEARCH. W. F. Robertson (Riegel Textile Corp.). Am. Dyestuff Reptr. 49: 224-226 (Apr. 4, 1960). (2091)

YUGOSLAV TEXTILE INDUSTRY. A. J. Booth (Manchester Coll. Science & Technol.). (Letter to the editor). J. Textile Inst. 51: P168-P169 (Mar. 1960). (2092)

AMERICAN TEXTILE MACHINERY EXHIBITION: PROCESSING MACHINES FOR KNITTING YARN AMONG EXHIBITS. Knitted Outerwear Times 28: 21-51 (May 2, 1960). (2093)

Participating firms are listed alphabetically, along with a brief description of the machinery they will exhibit.

THE INFORMATION PROBLEM. L. W. Ross (Ga. Inst. Technol.). Chem. Eng. 67: 143-148 (Mar. 21, 1960). (2094)

The information problems facing engineers are analyzed and practical suggestions are made for better use of the literature and of libraries and abstract and information services. 23 refs.

PREVIEW OF AMERICAN TEXTILE MACHINERY EXHIBITION INTERNATIONAL. Am. Textile Reptr. 74: 23-26, 65 (Apr. 14, 1960). (2095)

RUBBER DEVELOPMENTS: REVIEW OF THE LITERATURE FOR THE YEARS 1957-1959. L. E. Straka (Goodyear Tire & Rubber Co.). Mech. Eng. 82: 71-77 (Apr. 1960). (2096)

A review with 242 references.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Natural fibers A1

ROLLER TYPE COTTON GIN. J. M. Williams, Jr. and H. T. Montgomery. USP 2 929 111, Mar. 22, 1960. (2097)

Manmade fibers A2

ALL SKIN VISCOSE RAYON. M. R. Lytton (to Am. Viscose Corp.). USP 2 926 099, Feb. 23, 1960. (2098)

Small amounts of alkali-soluble alkylene oxide adducts of 1-m-hydroxyphenyl-8-p-hydroxyphenyl hexadecane in the spinning bath result in the production of all skin viscose fibers.

YARN PRODUCTION B

CRIMPING APPARATUS. H. Perlinger and H. Richter (Germany). BP 818 000, Aug. 12, 1959. Through BCIRA 40: 955 (1960). (2099)

The invention consists in the use of double-twist spindles instead of false twist tubes for twisting the yarn and untwisting it after the heat setting step.

YARN TREATMENT EQUIPMENT. G. S. Marr and W. Greenhalgh (to Brit. Cotton & Wool Dyers' Assoc. Ltd). BP 818 333, Aug. 12, 1959. Through BCIRA 40: 1051 (1960). (2100)

A J-box for yarn is divided into compartments by vertical partitions that support, louver fashion, glass plates serving as the front and rear walls of the box. Air for effecting oxidation thus comes into contact with the yarn.

STRETCHING OF POLYETHYLENE BULK POLYMER. NV de Bataafsche Petroleum Maatschappij. BP 818 516, Aug. 19, 1959. Through BCIRA 40: 919 (1960). (2101)

Means for stretching polyethylene in rod form so that it may then be split (filamented) into a voluminous mass of fiber for insulating purposes.

TWISTING AND CRIMPING DEVICE. F. Scragg, P. Forward, and N. Tyler (to E. Scragg & Sons Ltd). BP 818 950, Aug. 26, 1959. Through BCIRA 40: 954 (1960). (2102)

A false twist device comprises a rotary solid with a convex surface covered by friction material (e.g. synthetic rubber), means for pressing the running yarn against this surface, and means for moving the surface at right angles to the path of the yarn at the point of contact.

CUTTING APPARATUS FOR THE PRODUCTION OF STAPLE FIBER. E. Blaschke. BP 823 228, Apr. 11, 1959. Through BCIRA 40: 907 (1960). (2103)

A series of cup members mounted radially on a rotating drum presents an interrupted line of curvature over which the continuous filamentary material is passed, and a vacuum is created in the cups on each side of the cutting wheel so that the filaments are held during the cut. Pressure is created in the next cups to blow the cut fiber into a collecting trunk. Variations in length of staple are produced by altering the curvature of the cups.

APPARATUS FOR OPENING CRIMPED TOW. W. T. Jackson (to Eastman Kodak Co.). USP 2 926 392, Mar. 1, 1960. (2104)

Apparatus for tow opening which increases the cross-sectional area of the tow and the uniformity of fiber distribution while simultaneously removing shiners, married fibers, and concentrated bundles of filaments.

TOW STRETCHING APPARATUS. R. W. Stanley (to Industrial Rayon Corp.). USP 2 930 103, Mar. 29, 1960. (2105)

Opening, picking, fiber preparation B1

AUTOMATIC DOFFING MECHANISM FOR LAP WINDING MACHINES. M. Stein (Hungary). USP 2 929 570, Mar. 22, 1960. (2106)

Automatic lap doffing device of the type in which a lap is wound on a driven fluted carrier roller under pressure from a rack head that moves up and down to doff a full lap and feed an empty lap rod after a predetermined lap length has been reached.

Carding and combing B2

DRIVING MECHANISM FOR COTTON CARDING MACHINES. C. B. Adams. USP 2 928 139, Mar. 15, 1960. (2107)

The mechanism includes a driving motor and an automatic slip coupling, capable of driving the cylinder at the required rotational speed and of applying the proper starting and running torque to the cylinder at all times.

STRIPPING APPARATUS FOR CARD FLATS. H. O. Hess (to J. J. Rieter & Co. Ltd). USP 2 929 113, Mar. 22, 1960. (2108)

Suspension and drive for the flat stripping brush which ensures that the fibers and waste adhering to the bottom of the flats are lifted and stripped past the bends of the flat wires.

SLIVER PRODUCTION MEASURING DEVICE FOR CARDING MACHINES. C. L. Norton (to Dan River Mills). USP 2 929 145, Mar. 22, 1960. (2109)

Drawing and roving B3

SLIVER DELIVERY CONTROL DEVICE FOR DRAWING FRAMES. M. Welker and M. Puschmann (to VEB Spinnerei und Zwirnerei Maschinenbau). BP 818 593, Aug. 19, 1959. Through BCIRA 40: 947 (1960). (2110)

The invention seeks to check the run of sliver to its can if one of the constituent strands fails. Each strand runs through a feeler, and if a break or fault occurs the sliver guide is caused to deliver the sliver outside the can.

GILL BAR NEEDLE SUPPORT. G. A. Köhler (to Schiess AG). USP 2 927 347, Mar. 8, 1960. (2111)

Needles and spacers are loosely inserted into the gill bars and then locked at the ends of the bars. Spacer thickness can be varied according to the desired needling.

SLIVER DRAFTING APPARATUS FOR CORRECTIVE DRAFTING. M. A. Sanborn and W. G. Klein (to Bates Mfg. Co.). USP 2 930 084, Mar. 29, 1960. (2112)

Variable speed drive for drafting rolls controlled by means of a feedback voltage directly responsive to the relative speed of the drafting rolls.

Spinning, winding, twisting B4

BOBBINS. J. W. Berry (to Birmingham Aluminum Casting Co. Ltd). BP 818 016, Aug. 12, 1959. Through BCIRA 40: 986 (1960). (2113)

The claims are for a bobbin that is put together from separate barrel, flange, and boss parts. The boss (for gripping the spindle) fits into the barrel and has radial ear pieces for engaging the flange. The flange has a wall round its opening, standing alternately high and low. Portions of the barrel are expanded over the low places in the wall and the high places are engaged by the ears on the boss.

DRAFTING ROLL LUBRICATION FOR SPINNING FRAMES. Soc. Alsacienne de Constructions Mecaniques. BP 819 100, Aug. 26, 1959. Through BCIRA 40: 948 (1960). (2114)

The sleeve of a drafting roll is mounted on a bushing of self-lubricating sintered metal having a convex outer bearing surface of short radius of curvature, and a cylindrical inner bearing surface for rotation on a non-rotary shaft. Means are provided for adjusting the bushing and the roller axially, and for sealing the space between the shaft and the sleeve. The sleeve may contain oiled lubricating pads.

TRAVELING MACHINE FOR WASHING SPINDLE HOUSINGS. A. Reichert (Germany). BP 822 902, Nov. 4, 1959. Through BCIRA 40: 951 (1960). (2115)

The machine comprises a reservoir for washing oil and two pumps (in one unit) arranged above the reservoir, one for sucking up oil and delivering it under pressure to a washing head and the other for removing oil from the washing head and returning it, via a filter, to the reservoir. A third pump lifts fresh oil from a second reservoir to the cleaned spindle unit.

MOUNTINGS FOR SPINNING AND TWISTING SPINDLES. G. Meyer-Busche (Germany). BP 824 212, Nov. 25, 1959. Through BCIRA 40: 950 (1960). (2116)

A cup spring, held by a slotted collar and cooperating with an elastic underlay, is used to support a spindle against the spindle rail.

MULTIPLE SPINDLE DRIVE FOR SPINNING OR TWISTING MACHINES. Württembergische Spindelfabrik GmbH. BP 825 106, Dec. 9, 1959. Through BCIRA 40: 952 (1960). (2117)

Two rows of spindles are driven from one shaft, located between them, by means of endless belts, one for each spindle.

PNEUMATIC SPINNING APPARATUS. K. Gotzfried (Germany). BP 825 776, Dec. 23, 1959. Summary in BCIRA 40: 949 (1960). (2118)

TOP DRAFTING ROLL POSITIONING AND WEIGHTING. P. B. Tarbox (to Saco-Lowell Shops). USP 2 927 348, Mar. 8, 1960. (2119)

Mechanism for upper drafting elements of the short apron type in which at least certain of the elements, including the front roll, are allowed to swing transversely sufficiently to permit their self-alignment with their cooperating bottom rolls.

TOP DRAFTING ROLL MOUNTING FOR RING SPINNING FRAMES. E. Maurer (to Rollenlager-Spindelfabrik "Spintex" GmbH). USP 2 927 349, Mar. 8, 1960. (2120)

SUCTION CLEARER APPARATUS FOR SPINNING FRAMES AND SIMILAR TEXTILE MACHINES. B. S. Powell, Jr. (to Parks-Cramer Co.). USP 2 928 140, Mar. 15, 1960. (2121)

Suction head for positioning adjacent the front roll of the machine to collect and remove broken ends and prevent the accumulation of fly, lint, etc., on the roll surfaces.

PNEUMATIC SUCTION NOZZLE SPINNING DEVICE. K. Götzfried (Germany). USP 2 928 228, Mar. 15, 1960. (2122)

SLUBBING ATTACHMENT FOR SPINNING FRAME. H. J. Woods (to Burlington Inds.). USP 2 929 114, Mar. 22, 1960. (2123)

Electromagnetic clutch for periodically overdriving one or more drafting rolls to effect slubbing, and means for readily varying the length and frequency of the interruption intervals to achieve extreme variability in the slub pattern.

DRAFTING PROCESS AND APPARATUS. O. König (to SKF Kugellagerfabriken GmbH). USP 2 930 085, Mar. 29, 1960. (2124)

In the drafting of a band of fibers composed of fibers at least half of which are essentially the same length, the circumference of one drafting roll is considerably larger than the other, so that uniformity is obtained even if one of the rolls is untrue.

BOBBIN HOLDER. G. Fusaroli (to Sampre Meccanica di Precisione SpA). USP 2 928 625, Mar. 15, 1960. (2125)

The holder, of stamped metal, consists of two easily separable principal parts, one of them being normally affixed to a creel board and the other part being the body of the bobbin holder.

BRAKE FOR SPINNING AND TWISTING SPINDLES. H. Stahlecker (Germany). USP 2 928 230, Mar. 15, 1960. (2126)

The brake is mounted on the inside of a removable or hinged cover of a boxlike spindle housing and is actuated by a handle on the outside of the cover.

FLYERS FOR UPTWISTING MACHINES. F. Ridgway (to Arundel, Coulthard & Co. Ltd). USP 2 929 194, Mar. 22, 1960. (2127)

Means for controlling the amount of resistance to the rotation of the flyer by the double flanged bobbin upon which it rests.

CONTROL SYSTEM FOR RING SPINNING MACHINE. F. B. Bailey, C. S. Adams, and L. A. Deal (to Adams Inc.). USP 2 930 179 and 2 930 180, Mar. 29, 1960. (2128)

Ends down and slack ends indicator responsive to the action of the traveler.

YARN SUPPLY MEANS IN TWISTING MACHINES. F. Wright (to Prince-Smith & Stells Ltd). USP 2 930 181, Mar. 29, 1960. (2129)

In a machine in which the supply yarns are combined at a delivery roller prior to passing to the twisting unit, means are provided for preventing the starting up of the roller and spindle unless the supply yarns are correctly wrapped about the delivery roller.

TWISTING MACHINE STOP MOTION DEVICE. W. Lenk (to Barmer Maschinenfabrik AG). USP 2 930 182, Mar. 29, 1960. (2130)

Device for automatically stopping the machine in the event of yarn breakage or exhaustion of the yarn supply.

Yarns B5

THREADS OF FOAMED POLYURETHANE THREADS. W. Simon (Germany). BP 825 838, Dec. 23, 1959. Through BCIRA 40: 959 (1960). (2131)

A thread that simulates wool but can be made into textiles that resist oil and are easy to wash, is made by cutting a sheet of foamed polyurethane; the thread may be folded with conventional yarns. For example, a roll of the foamed sheet may be sliced by a cutting device heated to 150-380° C and folded with another yarn simultaneously.

YARN PACKAGE SUPPORT. J. Cocker, III (to Cocker Mach. & Foundry Co.). USP 2 930 542, Mar. 29, 1960. (2132)

Supports for sustaining hollow yarn packages so that yarns can be withdrawn either endwise or tangentially.

TREATMENT OF CRIMPED YARN. Heberlein & Co. AG. BP 825 119, Dec. 9, 1959. Through BCIRA 40: 956 (1960). (2133)

The stretchability of crimped yarns of nylon and the like is reduced by subjecting the fully stretched yarn to a moist or dry heat treatment of the desired severity and duration.

BICONICAL SUPPORT TUBE FOR TEXTILE THREADS. Papeteries René Sibille. BP 826 082, Dec. 23, 1959. Through BCIRA 40: 987 (1960). (2134)

Tapered or straight paper tubes are encased in two conical paper tubes, one at each end. The narrow ends of these cones are flush with the inner tube (towards the mid-region) and the wide ends are held away from the inner tube by blocking means; for example, the ends of the cones are rolled over inwards.

METHOD OF PRODUCING SLUB YARNS. H. J. Woods (to Burlington Inds.). USP 2 927 417, Mar. 8, 1960. (2135)

Yarn having slubs of random length at random intervals is produced by drafting and spinning together a number of slubbed rovings.

FALSE TWIST MACHINE FOR STRETCH YARN. S. V. Haas, Jr. (to Valco Mach. Co.). USP 2 928 229, Mar. 15, 1960. (2136)

APPARATUS FOR COVERING FRESHLY SPUN RAYON CAKES WITH A LIQUID PERMEABLE ENVELOPE. G. W. Allman, J. E. Sanford, and W. V. Henry (to Am. Enka Corp.). USP 2 929 178, Mar. 22, 1960. (2137)

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

TRAVERSING MOTION IN BOBBIN WINDING MACHINE FOR SYNTHETIC FIBER YARNS. Industrie Werke Karlsruhe AG. BP 819 143, Aug. 26, 1959. Through BCIRA 40: 984 (1960). (2138)

The invention relates to a traversing roller cam with two grooved paths, one for winding a single thread into a single package and the other (of half the throw) for winding two threads simultaneously into two half packages side by side.

AUTOMATIC BOBBIN WINDING MACHINES. W. Reiners. BP 823 211, Nov. 11, 1959. Through BCIRA 40: 983 (1960). (2139)

Attachment of the severed end from a full bobbin to the next empty bobbin, in automatic winding. The end is caught up and gripped near one end of the empty bobbin, without touching it, when the bobbins are changed and released as the speed of rotation of the fresh bobbin reaches a predetermined value.

PRE-SET YARN METERS. A. de Negri. BP 826 193, Dec. 31, 1959. Through BCIRA 40: 988 (1960). (2140)

The invention relates to an instrument that measures off running yarn and severs it when a pre-set length has passed over its main roller.

MAGNETIC TRAVERSE MECHANISM FOR HIGH SPEED WINDING. J. E. Bromley (to Chemstrand Corp.). USP 2 924 398, Feb. 9, 1960. (2141)

SLASHER OF THE HOT AIR DRYER TYPE. A. L. Park (to Saco-Lowell Shops). USP 2 927 363, Mar. 8, 1960. (2142)

SLASHER YARN SHEET TENSION CONTROL. A. C. Adams (to Saco-Lowell Shops). USP 2 927 364, Mar. 8, 1960. (2143)

The yarn sheet is drawn from the creel against a continuously adjustable braking tension and passes over a feed roll driven at a predetermined rate to the positively driven nip rolls in the size vat.

MACHINE FOR SEPARATING THE OUTSIDE THREAD OF A WARP FOR TYING. A. Altenweger (to Zellweger AG). USP 2 928 159, Mar. 15, 1960. (2144)

SLUB CATCHER. S. L. Abbott (to Abbott Mach. Co.). USP 2 929 129, Mar. 22, 1960. (2145)

In a device in which an enlargement in the yarn is deflected laterally by a slanting blade, a third blade is introduced before the region of maximum lateral displacement of the slub in order to increase selectivity between slubs and larger portions of acceptable yarn.

ELECTROMAGNETICALLY CONTROLLED YARN TENSIOMETER. E. T. Hitchin and G. V. Greatorex (to Brit. Celanese Ltd). USP 2 930 102, Mar. 29, 1960. (2146)

STOP MOTION FOR WINDING MACHINE. H. M. Miller (to Whitin Mach. Works). USP 2 930 538, Mar. 29, 1960. (2147)

Means for quickly stopping the motion of a spool holder when a broken thread occurs or when a predetermined number of yards of yarn has been wound on the spool.

LINT REMOVAL FROM WINDING MACHINES. W. V. Goodhue and F. W. Higgins (to Leesona Corp.). USP 2 930 543, Mar. 29, 1960. (2148)

Means for applying air jets to tension devices and slub catchers as they are opened in order to remove lint, fluff, or foreign material from them.

Weaving C2

ELECTRICALLY OPERATED SHEDDING MECHANISM. Textil-Apparatefabrik AG. BP 818 350, Aug. 12, 1959. Through BCIRA 40: 991 (1960). (2149)

Mechanism for weaving-in sequences of symbols selected from a common, conventional set (characters, figures, punctuation marks) comprises a stencil for each symbol, means for scanning each stencil, means for providing stepwise relative movement between each stencil (in its carrier) and the scanning means, means for transmitting the scanned information to warp-end deflectors, mechanism for selecting the desired sequence of symbols, and a searching instrument for operating the stepping means in the selected sequence.

SHUTTLELESS LOOM WITH CONTINUOUS WEFT FEED. R. Dewas (France). BP 818 508, Aug. 19, 1959. Through BCIRA 40: 993 (1960). (2150)

The invention relates to means for gripping the end of a shot of weft at the moment when it leaves the warp shed so as to retain the cut-off end of weft between the sheets of warp when released from the weft-inserter whatever the weave may be. The selvage ends are pressed together between the reed and the shafts so that the portions between the fell of the cloth and the reed are brought together and grip the end of weft as it is released.

HEDDLE FRAMES. F. Wilkinson (to Wool Textile Supplies Ltd). BP 818 631, Aug. 19, 1959. Through BCIRA 40: 992 (1960). (2151)

The rods carrying the wire heddles are supported at intervals by hooks that can slide along strips of metal secured at intervals to the upper and lower staves of the heddle frame. The hooks are integral with sleeve pieces that encircle the metal strips.

PILE WIRE LOOM FOR WILTON CARPETS. A. Brookes (to Brintons Ltd). BP 818 706, Aug. 19, 1959. Through BCIRA 40: 995 (1960). (2152)

Warp ends are raised from any one frame of yarns to different heights so as to form a multi-part shed with the yarns in each part inclined to the body of the fabric at a different angle from those in the other parts, a pile wire is inserted through the shed in each part, and the raised yarns are returned to the body of the fabric.

SHUTTLELESS LOOMS. Adolf Saurer Ltd. BP 825 109, Dec. 9, 1959. Through BCIRA 40: 990 (1960). (2153)

The weft is withdrawn from stationary packages on one side only of the warp. Two withdrawing motions are applied, the length of weft withdrawn being four times the length of the pick. After each such motion half of the weft is inserted in the shed in two picks so that a bound selvage is woven on the edge remote from the weft supply while the near edge has loops and loose ends alternately.

WEFT FEELER DETECTION DEVICE. J. W. Winstanley (to Brit. Northrop Ltd). BP 825 786, Dec. 23, 1959. Through BCIRA 40: 994 (1960). (2154)

A ray of light is directed on to the weft package in the shuttle, variation in the reflected light is sensed by a photo-transistor, and the current is amplified by means of another transistor or semi-conductor and made to operate, e.g. the weft replenishing mechanism.

WEFT MECHANISM FOR COPLESS LOOM. S. J. Twitchell (to E. W. Twitchell, Inc.). USP 2 927 610, Mar. 8, 1960. (2155)

Means for presenting and clamping yarn ends from a spool or other bulk source to and for pick up by the shuttle.

LOOM TEMPLE THREAD CUTTER. D. W. Poole and F. Ix, Jr. USP 2 928 431, Mar. 15, 1960. (2156)

An electrical resistance heat wire is mounted on the temple head for parting the projecting filling threads close to the selvage by a burning operation.

SELVAGE FORMATION. D. W. Shimwell (to Weaving Research & Textile Commn. Agents Ltd). BP 826 259, Dec. 31, 1959. Through BCIRA 40: 996 (1960). (2157)

A continuous weft is woven so as to leave loops at the selvages and hairpin-like lengths of weft are also inserted from both sides of the warp shed so that the legs pass into the loops. Alternate loops of the continuous weft and the loops provided by the hairpins lie close together to form strong, nonraveling selvages.

WEFT INSERTION FOR SHUTTLELESS LOOMS. M. R. Flamand (to Draper Corp.). USP 2 928 427, Mar. 15, 1960. (2158)

Upon penetration by the filling carrier of the threads forming the upper shed, the threads are caused to be deflected either above or below the carrier to prevent breaking or tearing.

WEFT INSERTION IN SHUTTLELESS LOOMS. G. W. Dunham. USP 2 928 428, Mar. 15, 1960. (2159)

Control mechanism for the automatic projection of a pilot across the lay, picking up of a weft thread by the pilot, release of an inserted weft thread from the pilot, and shearing of the trailing end of an inserted thread from a source of supply for each projection of the pilot.

REPLENISHING MEANS FOR LOOMS. J. P. Kieronski and G. G. Golm (to Universal Winding Co.). USP 2 928 429, Mar. 15, 1960. (2160)

Means for delaying and spacing apart bobbin transfer in multishuttle looms which transfer to a second shuttle is indicated immediately after transfer to a first.

FILLING CONTROL FOR BOBBIN CHANGING LOOM. P. C. Consoletti and R. Berry (to Draper Corp.). USP 2 928 430, Mar. 15, 1960. (2161)

Air operated cutter which functions to trap the weft yarn at one transfer cycle and cut it at the succeeding cycle.

SHUTTLE BOX STRUCTURE FOR PICK AND PICK AUTOMATIC LOOM. W. E. Kimmel (to Crompton & Knowles Corp.). USP 2 929 411, Mar. 22, 1960. (2162)

Shuttle sequence for effecting perfect blending in 2-color pick and pick fabrics is made possible by providing 3 shuttle box cells at the magazine end and separating the top cell from the lower cells so that it can be momentarily lifted to provide a path for the outgoing bobbin.

HANDWEAVING LOOM. F. Schraegle (Germany). USP 2 930 410, Mar. 29, 1960. (2163)

Reciprocation of the beater automatically operates pattern selection, shuttle movement, and width and advancement of the cloth beam.

Knitting C3

HOSIERY PACKAGING APPARATUS. W. S. Boone (to Waldension Hosiery Mills). USP 2 925 693, Feb. 23, 1960. (2164)

SELVAGE FOR FULL-FASHIONED HOSIERY. G. A. Urlaub. USP 2 925 725, Feb. 23, 1960. (2165)

The selvage of full-fashioned hosiery knit of two or more yarns is knit of a single yarn to provide a relatively light seam.

THREAD PULLING AND WINDING DEVICE. M. Feldstein and H. J. Friend. USP 2 926 416, Mar. 1, 1960. (2166)

Device for pulling the threads connecting knitted fabric blanks and winding them upon a suitable drum.

NOVELTY ANKLET SOCK. O. J. Robertson (to Pilot Hosiery Mills). USP 2 926 512, Mar. 1, 1960. (2167)

The anklet has a concealable pouch knit in the form of a double ply cuff which may be covered by a foldable leg portion.

WARP KNIT FABRIC. R. L. T. Connors (to Van Raalte Co.). USP 2 927 446 and 2 927 448, Mar. 8, 1960. (2168)

Double faced warp knit fabrics free of changeover lines and mirror effects are produced on the Simplex machine by employing combinations of open and closed loop stitches in the intermediate stitches instead of the usual paired open loops.

PATTERN DRUM INDEXING MECHANISM FOR CIRCULAR KNITTING MACHINES. P. A. Mahler (to Fidelity Mach. Co.). USP 2 927 447, Mar. 8, 1960. (2169)

PATTERN MECHANISM FOR HOSIERY MACHINE. H. T. Overton. USP 2 928 266, Mar. 15, 1960. (2170)

The pattern range can be increased from seven to thirteen or more steps on a machine originally designed for seven steps by providing a special form of jacks having high and low butts to supplement the usual sawtooth butts.

YARN SPEED METER FOR KNITTING MACHINES. L. Mishcon and H. Agulnek (to Supreme Knitting Mach. Co.). USP 2 929 023, Mar. 15, 1960. (2171)

YARN TENSIONING MEANS FOR WARP KNITTING MACHINES. F. P. Trumpio (to Textile Mach. Works). USP 2 929 233, Mar. 22, 1960. (2172)

SPLICING MECHANISM FOR CIRCULAR KNITTING MACHINES. T. J. Thore (to Fidelity Mach. Co.). USP 2 930 214, Mar. 29, 1960. (2173)

Fabrics C4

ARTIFICIAL FUR. W. J. Burkholder (to Diamond Alkali Co.). USP 2 925 359, Feb. 16, 1960. (2174)

The fabric is formed by preparing two woven fabric webs of different widths (the wider to serve as guard hair, the shorter to serve as underfur), laminating to form a web of alternating longer and shorter widths, compacting so that their edges fall in the same plane, anchoring the edges to a backing material, and dissolving the warp from the fabric.

HEAT-INSULATING SHAPED BODIES. Farbwerke Hoechst AG. BP 824 170, Nov. 25, 1959. Through BCIRA 40: 1004 (1960). (2175)

Heat-insulating, shaped bodies for cushions, quilts, upholstery, or clothing comprise shaped, tangled masses of crimped, hydrophobic, synthetic fibers coated with an elastic lacquer obtained by spraying a solution of the components (e.g. a di-isocyanate plus a polyester, or a melamine resin) evaporating the solvent, and hardening.

CONVERTING INDIVIDUAL ASBESTOS FIBERS INTO COHERENT FIBROUS BODIES. W. Graf von Rex, S. Wilke, and W. Wilke (Germany). BP 824 446, Dec. 2, 1959. Through BCIRA 40: 921 (1960). (2176)

A dispersion of asbestos fiber in a liquid (e.g. a solution of rubber, cellulose acetate or a synthetic resin) is forced through a nozzle of the desired cross-section, and coagulated as it emerges (e.g. by heat).

SURGICAL TUBES. Soc. Rhodiaceta. BP 825 183, Dec. 9, 1959. Through BCIRA 40: 997 (1960). (2177)

The invention relates to the use, in surgery, of tubes made from fabric woven with warp and/or weft of bulky continuous filaments (e.g. Helanca acrylonitrile polymer) for replacing tubular parts of the body (e.g. arteries and the oesophagus).

NONWOVEN FABRIC. N. L. Olken. BP 825 925, Dec. 23, 1959. Through BCIRA 40: 999 (1960). (2178)

Yarn packages are mounted on a rotating, circular platform from which they are drawn upwards through a corresponding circular reed as a right cylindrical array. The successive yarns in their rotation then pass at one point a succession of pick-up instruments which carry them one by one over the surface of an imaginary cone at a predetermined angle A (e.g. 45°) to the base. At a second point, diametrically opposite the first, a second set of pick-up instruments carry the yarns back at an angle of 180-A degrees. An adhesive is applied at the points of intersection of the two sets of yarns.

COTTON FABRIC SELVAGES. Reggiani Manifattura SpA. BP 826 159, Dec. 31, 1959. Through BCIRA 40: 998 (1960). (2179)

The cloth is woven with dyed selvage warps of non-cellulosic yarn (especially of synthetic fiber) so that it may afterwards be piece dyed, mercerized, printed, etc. without affecting the selvages, which present a different color.

APPARATUS FOR MAKING BONDED FIBROUS GLASS MATS. L. D. Moore and W. G. Cole (to Ferro Corp.). USP 2 925 117, Feb. 16, 1960. (2180)

APPARATUS FOR PRODUCING GLASS FIBER MATS BY ELECTROSTATIC DEPOSITION. K. Sittel (to Walsco Co.). USP 2 925 629, Feb. 23, 1960. (2181)

APPARATUS FOR PRODUCING FELT. C. J. Nelson (to Troy Blanket Mills). USP 2 927 350, Mar. 8, 1960. (2182)

The angularity of the fibers is controlled to impart a predetermined tensile strength in any direction.

AIR-LAID MIXED TEXTILE AND WOOD FIBER FELT. T. C. Duvall (to Wood Conversion Co.). USP 2 926 417, Mar. 1, 1960. (2183)

APPARATUS FOR PRODUCING CURLY GLASS FIBERS IN MAT FORM. G. Slayter, C. B. Warden, and R. C. Mercer (to Owens-Corning Fiberglas Corp.). USP 2 927 621, Mar. 8, 1960. (2184)

PATTERNING MECHANISM FOR TUFTED CARPETS. P. F. Moonan and J. E. Smith (to James Lees & Sons Co.). USP 2 928 099, Mar. 15, 1960. (2185)

A constant feed device is used to produce a tufted fabric having a series of differently colored pile ends, one of the colors being hidden beneath the other color in certain selected areas and vice versa in other areas.

TEXTILE RIBBON. E. Hagenbuch (to Bandfabrik Breitenbach AG). USP 2 928 432, Mar. 15, 1960. (2186)

Ribbon with a plush finish on one side consists essentially of a base fabric of nonelastic warp and filling threads and highly stretchable, crimped warp threads tied into the base fabric at regularly spaced intervals.

MULTI-PLY COLLAR FABRIC. T. C. Abendroth. USP 2 929 412, Mar. 22, 1960. (2187)

The respective warps and wefts of one of the fabric layers are arranged to counteract the innate tendency of the other layer to curl, especially at the corners of cut ends.

UPHOLSTERY FABRIC WOVEN FROM A MIXTURE OF SARAN FILAMENTS AND PAPER YARNS. G. O. Lienhard (to Chicopee Mfg. Corp.). USP 2 929 414, Mar. 22, 1960. (2188)

APPARATUS FOR SPRAYING A MIXTURE OF FIBERS AND RESIN FOR FIBER REINFORCED PLASTICS. W. J. Hampshire (to Goodyear Aircraft Corp.). USP 2 929 436, Mar. 22, 1960. (2189)

NEEDLE FELTING LOOM. E. C. Rust, Jr. (to James Hunter Mach. Co.). USP 2 930 100, Mar. 29, 1960. (2190)

The means for raising and lowering the bed plate also serve to facilitate placing an endless loop of the material on the loom and removing it from the loom.

POWER TRANSMISSION AND CONVEYOR BELTING. G. E. Watts and S. Moverley (to J. H. Fenner & Co. Ltd). USP 2 930 104, Mar. 29, 1960. (2191)

The surface resistivity of the rubber coated multiple ply fabric is reduced by applying a coating of electrically conductive carbon in powder form to its outer surface.

AMINOPLASTIC RESIN IMPREGNATED LAMINATES. J. R. Baranyi (Germany). USP 2 930 727, Mar. 29, 1960. (2192)

Thin, flexible laminates composed of superimposed fibrous sheets bonded together with a heat-cured melamine aldehyde resin modified with polyvinyl acetate and glyoxal.

FABRICATING CARPET UNITS FROM WASTE TIRE CARCASSES. H. L. Lea (to D. W. Moor Rubber Corp.). USP 2 930 729, Mar. 29, 1960. (2193)

Strips cut from the tire carcass are abraded to remove the rubber matrix from the reinforcing cords and to expose an appreciable textile pile. The strips are assembled, compressed, and vulcanized into a unitary structure.

FINISHING D

ROLLER SUPPORTS FOR WEB PROCESSING. J. Zimmer (Austria). BP 822 833, Nov. 4, 1959. Through BCIRA 40: 1052 (1960). (2194)

The working (e.g. squeeze) or support rollers for use in the processing of fabrics or paper are carried, not on axles, but in bearing boxes that partially embrace the rollers over their whole length and are surfaced with a fluorocarbon lubricant. The boxes may be sectional and placed end to end. They themselves are supported on pressure pads in a casing; for a pair of rollers, one set of pressure pads may be hydraulic and the other pneumatic.

TENSION ROLLS FOR CONTINUOUS WEBS. L. C. Litten (to Strachan & Henshaw Ltd). BP 826 251, Dec. 31, 1959. Through BCIRA 40: 1053 (1960). (2195)

The web (e.g. fabric or paper) passes around a tensioning roller, over a support that moves to and fro through an angle around the tensioning roller, and between two guide elements mounted on the support. Any deviation from the desired tension causes one guide or the other to move the web so that it is wrapped more or less, as required, around the tension roller.

TREATMENT OF BIAS FABRIC WEBS. E. Mayer (Germany). USP 2 928 160, Mar. 15, 1960. (2196)

Fabric webs produced by the helical cutting of a tube or hose and treated by singeing, bleaching, or dressing while under longitudinal tension are relaxed and fed to a width-stretching device, so that the acute thread angle produced by the longitudinal stretching becomes more obtuse.

Chemical processes D1

APPARATUS FOR CONTINUOUSLY WASHING RUNNING LENGTHS OF MATERIAL. E. S. Olson (to Deering Milliken Research Corp.). BP 817 384, July 29, 1959. Through BCIRA 40: 372 (1960). (2197)

A perforated cylinder is mounted horizontally in the washing tank and is oscillated through an arc of less than 180°. Radial baffles are fixed along the inside. The length of fabric enters through a guide opening at the top of the cylinder at one end and runs out at a similar opening at the other end. It may be joined end to end and run repeatedly through the apparatus as an endless band.

INFLAMMABLE STYRENE POLYMERS. Badische Anilin und Soda Fabrik AG. BP 825 611, Dec. 16, 1959. Through BCIRA 40: 1065 (1960). (2198)

Flame resistant articles (especially solid foams) are made from styrene polymers that contain 0.2 to 6% of tri-($\beta\gamma$-dibromopropyl) orthophosphate.

APPARATUS FOR USE IN CONTACT WITH ACID CHLORITE SOLUTIONS. Deutsche Gold und Silber Scheideanstalt. BP 817 615, Aug. 6, 1959. Through BCIRA 40: 795 (1960). (2199)

The vital parts are constructed of pure aluminum or an alloy of aluminum with up to 0.5% magnesium, and the surfaces are electrolytically oxidized in a bath of sulfuric, chromic, or oxalic acid.

PRODUCTION OF RESIN FILLED SHEETLIKE MATERIAL. C. Dunbar and J. Lunt (to Winterbottom Book Cloth Co. Ltd). BP 817 891, Aug. 6, 1959. Through BCIRA 40: 800 (1960). (2200)

A polyester is prepared by conventional means, e.g. from maleic anhydride, adipic acid and glycol, and then condensed with ethyl acrylate in the presence of benzoyl peroxide. The resulting polyester composition is used to coat and impregnate a sheet of fabric (e.g. cotton) so as to produce a flexible material.

WATERPROOFING AGENT. E. H. Coles and W. S. Miller (to Calico Printers' Assoc. Ltd). BP 818 778, Aug. 26, 1959. Through BCIRA 40: 1066 (1960). (2201)

Condensation in the presence of an agent for binding acid is effected in the material between cyanuric chloride or 2:4-dichloro-6-amino-1:3:5-triazine and hexadecylamine or octadecylamine.

ANTISTATIC AGENTS FOR NYLON. Ciba Ltd. BP 818 844, Aug. 26, 1959. Through BCIRA 40: 943 (1960). (2202)

A series of antistatic agents is obtained by condensing together (1) a formaldehyde condensation product of an aminotriazine (e.g. melamine) or urea, or a C_1-C_4 ether thereof, (2) a compound capable of introducing polyglycol ether chains or a number of hydroxyethyl groups, and (3) a compound containing a basic nitrogen atom.

PREVENTING THE ELECTROSTATIC CHARGING OF FIBERS. Badische Anilin und Soda Fabrik AG. BP 819 021, Aug. 26, 1959. Through BCIRA 40: 941 (1960). (2203)

The material is treated in two separate baths, one containing a solution of a highly polymeric cation-active compound (e.g. poly-N-vinylimidazole quaternized with dimethyl sulfate) and the other containing an anion-active polymer (e.g. a styrene/maleic acid copolymer).

OPTICAL BLEACHING AGENTS. Compagnie Francaise des Matières Colorantes. BP 825 751, Dec. 23, 1959. Through BCIRA 40: 1050 (1960). (2204)

The 1:3:5-triazine system is introduced into optical bleaching agents of the stilbene series by the action of cyanuric chloride on such compounds as 4:4'-diaminostilbene-2:2'-disulfonic acid.

CELLULOSE ANTHRANILATE FIBERS. W. A. Reeves and R. H. Wade (to U.S. Secy. Agri.). USP 2 926 063, Feb. 23, 1960. (2205)

Cotton in the form of fibers, sliver, yarn, or fabric is treated with an aqueous solution containing isatoic anhydride, a strong base, and a solvent for the anhydride to produce fibers with good dye affinity, reduced moisture affinity, and increased rot resistance.

SHRINKPROOFING WOOL. A. Rapp (to Boehme Fettchemie GmbH). USP 2 926 064, Feb. 23, 1960. (2206)

Single bath process for simultaneously making wool resistant to shrinking and felting by treating the wool with fat-like or resin-like epoxides in combination with compounds having a halogenating and/or oxidizing effect.

FIRE RESISTANT COMPOSITION. M. Leatherman (to U.S. Secy. War). USP 2 926 097, Feb. 23, 1960. (2207)

Fabrics resistant to fire and penetration by vesicant vapors are produced by treatment with a composition consisting essentially of a chloramide, a dechlorinating agent, and chlorinated paraffin as a binder.

PRODUCTION OF MECHANICAL EFFECTS ON LIGHTWEIGHT COTTON FABRICS. E. Weiss and F. Vonaesch (to Heberlein Patent Corp.). USP 2 926 414, Mar. 1, 1960. (2208)

The fabric is caused to shrink in an aqueous alkali solution, treated with a resin precondensate, calendered to impart an embossed, Shreiner, or moire effect, and heated to set the resin.

ANTIVESICANT COMPOSITION. T. J. Albert and R. Pfanstiel (to U.S. Secy. War). USP 2 927 037, Mar. 1, 1960. (2209)

Clothing is rendered impervious to mustard gas by impregnation with a solution of bis(2,4,6-trichlorophenylchloro)urea in paraffin oil and urea.

Dyeing and printing D2

OXIDATION DYEINGS AND PRINTS ON COTTON. Farbenfabriken Bayer AG. BP 818 110, Aug. 12, 1959. Through BCIRA 40: 1058 (1960). (2210)

The invention consists in using instead of aromatic amines their N-glycosides (especially glucosides) or their reduction products.

DYEING MACHINES. E. Stanway. BP 818 332, Aug. 12, 1959. Through BCIRA 40: 1054 (1960). (2211)

Fabric in rope form is fed into a winch dyeing machine along a trough through which liquor is circulated to plait or fold the fabric into a perforated compartment at one side of the dyeing machine; the trough is given an arcuate movement by a link and crank operated by a drive from the machine.

WATER DISPERSIBLE DYES. H. A. Toulmin (to Commonwealth Eng. Co.). BP 818 750, Aug. 19, 1959. Through BCIRA 40: 1055 (1960). (2212)

The claims are for blends of dyes with carboxymethyl ethers of dextrans, which are self-dispersible in water to give stable dye baths.

PROCESS FOR PRINTING TEXTILE FABRICS WITH VAT DYESTUFFS. Farbenfabriken Bayer AG. BP 818 790, Aug. 26, 1959. Through BCIRA 40: 1060 (1960). (2213)

Alkali or alkaline-earth borohydrides are used as reducing agents for vat dyes.

AZO DYES FOR CELLULOSIC TEXTILES. W. Baird, D. K. Lawman, W. E. Stephen, and C. D. Weston (to Imp. Chem. Inds. Ltd). BP 819 320, Sept. 2, 1959. Through BCIRA 40: 1056 (1960). (2214)

The dyes used are mono- and poly-azo dyes that contain sulfonfluoride groups.

OIL-IN-WATER EMULSION PRINTING PASTE. J. R. Geigy SA. BP 824 277, Nov. 25, 1959. Through BCIRA 40: 1059 (1960). (2215)

A printing paste is made up in an emulsion of an amine/aldehyde resin, a fatty acid ester resin, and a synthetic elastomer.

DYEING OF NITROGENOUS FIBERS. Farbenfabriken Bayer AG. BP 824 459, Dec. 2, 1959. Through BCIRA 40: 377 (1960). (2216)

A polymeric N-vinyllactam (e.g. N-vinylpyrrolidone) together with an aldehyde/ammonia product (e.g. hexamethylenetetramine) is used as leveling agent in the dyeing of wool, silk, and nylon with metal-complexes (e.g. Cr) of dyes.

DYEING POLYACRYLONITRILE FIBERS. Badische Anilin & Soda Fabrik AG. BP 824 530, Dec. 2, 1959. Through BCIRA 40: 375 (1960). (2217)

The dyes used are amides of aminoanthraquinone carboxylic acids in which the amidic-N is substituted by a radical that contains at least one tert.-amino group, e.g. the ω-dimethylaminopropylamide of 1:4-diamino-anthraquinone-2-carboxylic acid.

DYEING PROCESS FOR PROTEIN FIBERS. H. R. Hadfield and R. H. Ricketts (to Imp. Chem. Inds. Ltd). BP 824 690, Dec. 2, 1959. Through BCIRA 40: 376 (1960). (2218)

The dyes are obtained by coupling diazotized aminoaryl sulfonfluorides with azoic coupling components containing at least one sulfonic acid group.

COLORING GLASS FIBERS. Compagnie Francaise des Matières Colorantes. BP 825 010, Dec. 9, 1959. Through BCIRA 40: 797 (1960). (2219)

Use is made of soluble and ionizable chromium complexes of dyes containing the chromium and the dye in the cation.

IMPROVED DYE FASTNESS. W. F. Beech, D. A. Garrett, and H. R. Hadfield (to Imp. Chem. Inds. Ltd). BP 825 017, Dec. 9, 1959. Through BCIRA 40: 798 (1960). (2220)

The invention relates to the use of halogenated 1:3:5-triazine compounds for increasing the fastness of dyeings to dry heat treatments, to wet treatments, and to burnt gas fumes. The agents may be applied with the dye or in an aftertreatment or before printing.

PRODUCTION OF OXIDATION PRINTS. E. Lehmann, H. Kleiner, and H.-J. Manderla (to Farbenfabriken Bayer AG). USP 2 926 060, Feb. 23, 1960. (2221)

The printing paste consists essentially of an azomethine of an aromatic amine, oxidizing agent, oxidizing catalyst, solvent, thickener, and dispersing agent.

DOCTOR BLADE MOUNTING. E. Smith and T. Scholes (to D. S. T. Pattern & Eng. Co. Ltd). BP 825 436, Dec. 16, 1959. Through BCIRA 40: 378 (1960). (2222)

The doctor blade is mounted so that it will apply uniform pressure on a roller in spite of the sagging of its supports or eccentricity of the roller. The blade is mounted in a channel-like holder and bears upon a resilient fulcrum extending lengthwise near the mouth of the holder. Part of the blade between the fulcrum and the channel base is engaged between two opposed lengthwise resilient abutments that hold the blade clear of the channel walls. One of the abutments is an inflatable tube that urges the blade against the roller with an adjustable pressure distributed uniformly along its edge.

DYEING POLYETHYLENE TEREPHTHALATE OR CELLULOSE TRIACETATE WITH DISPERSE DYES. W. Hees (to Farbenfabriken Bayer AG). USP 2 916 345, Dec. 8, 1959. (2223)

The process is carried out in aqueous medium at boiling temperature in the presence of aryl esters of carbonic acid.

IMPROVED DYEING OF CELLULOSE DERIVATIVES. J. Eisele, W. Federkiel, C. Schuster, and K. Maier (to Badische Anilin & Soda Fabrik AG). USP 2 925 314, Feb. 16, 1960. (2224)

The receptivity of cellulose fibers to dyes containing sulfonic acid or sulfonic acid amide groups is increased by treatment before or during dyeing with carbamic acid esters of a saturated alcohol containing an amino group.

SPUN DYED VISCOSE FIBERS. J. Wegmann and C. Becker (to Ciba Ltd). USP 2 927 035, Mar. 1, 1960. (2225)

An azo dye having a sulfonic acid group and a chlorinated 1:3:5-triazine radical is added to the spinning bath.

Mechanical processes D3

EMBOSSING ACETATE KNIT FABRICS. H. Ewing and J. R. Wylde (to Brit. Celanese Ltd). USP 2 915 787, Dec. 8, 1959. (2226)

The fabric is wet with an aqueous solution containing a softening agent and is pressed between a water absorbent belt of resilient textile material and an embossing surface at 170 to 190° C.

ROTATABLE MOUNTING FOR NAPPING ROLLS. W. Miessen (to Firma A. Monforts). USP 2 923 998, Feb. 9, 1960. (2227)

The rolls are mounted between stub shafts which, in turn, are permanently mounted in ball bearings so that the rolls may be removed for grinding without disturbing the bearings.

FABRIC STRETCHING APPARATUS. D. F. Miller (to E. I. du Pont de Nemours & Co.). USP 2 923 999, Feb. 9, 1960. (2228)

Chain link construction for regulating the degree of longitudinal and lateral stretching.

PLEATING THERMOPLASTIC FIBER FABRICS. R. P. Nirenberg (to Chemstrand Corp.). USP 2 924 361, Feb. 9, 1960. (2229)

Pleated fabrics free of glaze and puckering by arranging dampened fabric in a pleating assembly which is opened to within 80 or 90% of its extensible length, folding to form pleats, heating until the fabric is dry, and slowly cooling the assembly.

TENSION CONTROL APPARATUS FOR WEB WINDING MACHINE. G. De Gelleke (to Cameron Mach. Co.). USP 2 925 963, Feb. 23, 1960. (2230)

Means for utilizing torque variations which occur at the motor for controlling tension in the running web.

Drying, setting, conditioning D4

YARN PACKAGE DRYER. D. Macfie (to Brit. Cotton Ind. Research Assoc.). BP 825 121, Dec. 9, 1959. Through BCIRA 40: 801 (1960). (2231)

The invention takes advantage of axial compression of a yarn package to facilitate the passage of air through the yarn for the purpose of a first stage of drying. Preferably, the yarn is cross-wound on a helical spring core, advantageously under slight axial compression. After wet treatment, the package is placed between end flanges connected to a suction or compressed-air device and compressed axially. Air is then drawn or blown through the package, the axial pressure is relieved, and the package returns to its normal length.

APPARATUS FOR DRYING STAPLE FIBERS. J. H. Breakell (to Am. Viscose Corp.). USP 2 920 397, Jan. 12, 1960. (2232)

The staple fibers are formed into a fiber blanket and conveyed through an elongated housing into which a preheated drying medium is fed and circulated and recirculated.

PERFORATED DRUM DRYER FOR LOOSE FIBROUS MATERIALS. E. Kiefer (Germany). USP 2 922 229, Jan. 26, 1960. (2233)

TESTING AND MEASUREMENT E

Fibers E1

SEMI-AUTOMATIC AIR FLOW APPARATUS FOR MEASURING FIBER PERMEABILITY. E. E. Berkley, S. C. Mayne, Jr., and J. A. Reddick (to Sheffield Corp.). USP 2 919 573, Jan. 5, 1960. (2234)

OPTICAL SYSTEM FOR MEASURING FIBER DIAMETERS. R. H. Vacca (to Nat. Research Corp.). USP 2 927 217, Mar. 1, 1960. (2235)

Apparatus comprises means for optically scanning a series of fibers arranged in a parallel manner so as to provide a series of electrical pulses whose duration bears direct relationship to the diameters of the individual fibers.